160 U.S. 426

TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1894.

No. ~~386.~~ 85

JABEZ H. GILL, APPELLANT,

vs.

THE UNITED STATES.

APPEAL FROM THE COURT OF CLAIMS.

FILED JANUARY 30, 1892.

(14,971.)

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SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1894.

No. 366.

THE LAW ASSOCIATION OF PHILADELPHIA

JABEZ H. GILL, APPELLANT,

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JUDD & DETWEILER, PRINTERS, WASHINGTON, D. C., DECEMBER 22, 1894.

1 In the Court of Claims.

JABEZ H. GILL
vs.
THE UNITED STATES. } No. 14401.

I.—*Filing and Traverse of Original Petition.*

The original petition in this cause was filed by the claimant June 25, 1884.

The traverse of said petition was filed by the defendants July 3, 1884.

By leave of court the claimant was allowed to file an amended petition in lieu of said original petition November 29, 1884, as follows:

II.—*Amended Petition Filed November 29, 1884.*

From March, 1864, until March, 1881, the claimant was employed by the defendant as machinist, foreman, and draughtsman at Frankford arsenal, in the State of Pennsylvania; and since March, 1881, he has been employed by the defendant as master armorer at said arsenal. Since March, 1864, he has received a per diem compensation for his services. The terms of his employment required him to perform manual labor, and to exercise his mechanical skill in the service of the defendant, but did not require the exercise of his inventive genius in such service, nor secure to the defendant the right to use any inventions of the claimant without compensation therefor.

Letters patent of the United States were granted to the claimant while in the service of the defendant, as follows:

No. 97904, dated December 14, 1869, for a cartridge-loading machine; No. 185,858, dated January 2, 1877, for a weighing machine; No. 208,903, dated October 15, 1878, for a gauging machine; No. 220,472, dated October 14, 1879, for a cartridge anvil; No. 241,962, dated May 24, 1881, for a heading machine; No. 257,860, dated May 16, 1882, for a priming tool for reloading.

2 The claimant at different times assigned and transferred to private persons or corporations all the inventions covered by said letters patent, but reserved for the defendant the right to use them, and at all times before and after such assignments and transfers permitted the defendant to use said inventions.

The right secured by letters patent No. 97,904 was assigned to the United States Metallic Cartridge Company, with the reservation above mentioned; and the assignment was recorded June 30, 1870, in Liber E 13, page 11, of the records of assignments in the Patent Office. The right secured by letters patent No. 185,858 was assigned to the Union Metallic Cartridge Company, with the same reservation; and the assignment was recorded June 22, 1877, in Liber R 27, page 303, of said records. The right secured by letters patent

No. 208,903 was assigned to the Union Metallic Cartridge Company, with the same reservation; and the assignment was recorded November 4, 1878, in Liber P 23, page 49, of said records. The right secured by letters patent No. 220,472 was assigned to the Union Metallic Cartridge Company, with the same reservation; and the assignment was recorded October 29, 1879, in Liber W 24, page 13, of said records. The right secured by letters patent No. 241,962 was assigned to Hartley & Graham, with the same reservation; and the assignment was recorded June 26, 1882, in Liber B 28, page 350, of said records. The right secured by letters patent No. 258,860 was assigned to Hartley & Graham, with the same reservation; and the assignment was recorded June 26, 1882, in Liber B 28, page 351, of said records.

Before the 4th day of July, 1884, the defendant used the claimant's said inventions as follows:

The invention covered by letters patent No. 97,904, in loading 97,573,830 cartridges.

3 The invention covered by letters patent No. 185,858, in the manufacture of 40,870,994 cartridges;

The invention covered by letters patent No. 208,903, in the manufacture of 37,915,854 cartridges;

The invention covered by letters patent No. 220,472, in the manufacture of 32,537,138 cartridges;

The invention covered by letters patent No. 241,962, in the manufacture of 16,832,178 cartridges; and

The invention covered by letters patent No. 257,860, in the manufacture of 1,040 priming tools for reloading cartridges.

The just and reasonable value of the use of the invention covered by letters patent No. 97,904 is fifty cents for every thousand cartridges manufactured, amounting to $48,678.30; of the invention covered by letters patent No. 185,858, forty cents per thousand, amounting to $14,584.80; of the invention covered by letters patent No. 208,903, forty cents per thousand, amounting to $12,211.60; of the invention covered by letters patent No. 220,472, thirty-five cents per thousand, amounting to $11,387.99; of the invention covered by letters patent No. 241,692, thirty-five cents per thousand, amounting to $7,280.35; and of the invention covered by letters patent No. 257,860, fifty cents for each tool, amounting to $550.

The just and reasonable value of the use of said several devices by the defendant prior to July 4, 1884, amounts in the aggregate to $94,693.04.

There is due from the defendant to the claimant, on an implied contract, for the use of said inventions, the sum of $94,693.04, no part of which has ever been paid.

No action on this claim has been had in any department of the Government, beyond repeated acknowledgments by the ordnance department of the claimant's right to compensation for the use of said inventions.

4 The claimant is a citizen of the United States, residing at Frankford Arsenal, in the State of Pennsylvania. He has not in any way voluntarily aided, abetted, or given encouragement

to rebellion against the Government of the United States, but has at all times borne true allegiance to said Government.

No assignment or transfer of said claim, or of any part thereof or interest therein, has been made, except as herein set forth.

The claimant demands judgment against the defendant by reason of the premises for the sum of $94,693.04.

JABEZ H. GILL.

Claimant's post-office address is Frankford Arsenal, Philadelphia, Pennsylvania.

The post-office address of claimant's attorney, H. E. Paine, is No. 412 Fifth street, Washington, D. C.

STATE OF PENNSYLVANIA, }
County of Philadelphia, } ss:

Jabez H. Gill, having been duly sworn, says that he is the claimant named in the foregoing amended petition; that said amended petition is true as to all matters therein stated upon his own knowledge, and that as to all other matters therein stated he believes it to be true.

JABEZ H. GILL.

Subscribed and sworn before me this 26th day of November, 1884.

[SEAL.] J. J. O'REILLY,
Notary Public, Philadelphia, Pennsylvania.

5 III.—*Traverse. Filed April* 23, 1890.

And now comes Attorney General on behalf of the United States, and, answering the amended petition of the claimant herein, denies each and every allegation therein contained and asks judgment that the said amended petition be dismissed.

And as to so much of the said amended petition as avers that the said claimant has at all times borne true faith and allegiance to the Government of the United States and has not in any way voluntarily aided, abetted, or given encouragement to rebellion against the said Government the Attorney General, in pursuance of the statute in such case provided, denies the said allegations and asks judgment accordingly.

JOHN B. COTTON,
Assistant Attorney General.

6 IV.—*Submission of Case. May* 5, 1890.

At a Court of Claims held in the city of Washington on the 5th day of May, 1890—

This case was submitted upon the question whether or not the claimant can maintain his action under the circumstances, even if his patents be valid and useful and were used by the defendants,

reserving the right to Mr. Paine to continue his argument if the court should be of the opinion that the claimant may maintain his action if the allegations as to the validity, usefulness, and use of his patents be proved.

7 V.—*Further Proceedings in the Case.*

The court filed its findings of fact and conclusion of law June 2, 1890, and judgment was entered June 2, 1890, dismissing the petition of the claimant.

On a rehearing of this case (granted on motion of the claimant for a new trial) the court, on the 6th day of April, 1891, made the following order, to wit:

JABEZ H. GILL
vs.
THE UNITED STATES. } No. 14401.

It is ordered that the judgment entered in this case on the second day of June, 1890, be vacated and set aside, and that the findings of fact then filed be withdrawn; and it is further ordered that on the findings of fact now filed and the opinion of the court heretofore delivered judgment be entered dismissing the petition of the claimant.

8 VI.—*Findings of Fact and Conclusion of Law Filed by the Court April 6, 1891.*

This case having been heard before the Court of Claims, the court, upon the evidence, finds the facts to be as follows:

I.

During the period of time within which the claimant invented the devices hereinafter mentioned he was in the defendants' employment, and received wages, or a salary, for his services. The terms of his employment required him to exercise his mechanical skill in the service of the defendants, but did not require the exercise of his inventive genius in such service, nor secure to the defendants the right to use any inventions of the claimant without compensation therefor.

Letters patent of the United States were granted to the claimant, while in the service of the defendants, as follows: No. 97904, dated December 14, 1869, for a cartridge-loading machine; No. 185,858, dated January 2, 1877, for a cartridge weighing machine; No. 208,903, dated October 15, 1878, for a cartridge gauging machine; No. 220,472, dated October 14, 1879, for a cartridge anvil; No. 241,962, dated May 24, 1881, for a cartridge heading machine; No. 257,860, dated May 16, 1882, for a priming tool for reloading.

II.

The manner in which the inventions above referred to originated and came into the use of the Government was as follows:

In 1867 the claimant, being a machinist or skilled mechanic in the Frankford arsenal and getting as compensation $4 a day, came to General Benét, the commanding officer, and suggested that an improvement could be made in the method of loading cartridges, and exhibited to the commanding officer then or subsequently his device for an improvement which is now embodied in patent No. 97904.

General Benét, after due examination and consideration, authorized the construction of such a machine. The machine was built at a cost of $500 by the United States according to the design of the claimant. On its completion it proved to be thoroughly satisfactory to the commanding officer, who authorized the construction of a second machine. The construction of both took place under the immediate supervision of the claimant, and such supervision was a part of his ordinary duty and employment. Subsequently successive commanding officers ordered from time to time six other machines to be constructed, which in like manner were built
9 under the immediate supervision of the claimant, and all of these eight machines were completed prior to the claimant filing his application for a patent.

After his patent had been issued a ninth machine was also ordered, and in like manner constructed under the immediate supervision of the claimant. These machines have been used by the Government at the Frankfort arsenal in the manufacture of cartridges, and continue in use to the present time.

III.

At no time did the claimant ever bring his invention before a commanding officer or other agent of the Government as a subject of purchase and sale; nor did he ever raise an objection to the use of the invention as set forth in the preceding finding; nor did he ever enter into an express agreement, written or oral, whereby a license was granted or intended to be granted to the Government to operate and use the machine described in the preceding finding, or whereby the claimant waived or intended to waive his legal or equitable right, if any, to compensation; nor did any commanding officer ever undertake or assume to incur a legal or pecuniary obligation on the part of the Government for the use of the invention or the right to manufacture thereunder.

The claimant was not employed to make inventions nor assigned to that duty, and his invention, until it was reduced to paper in the form of an intelligible drawing, was made out of the hours of labor at the arsenal and during the time which was properly his own, and the thought and time which he devoted to it were voluntarily given, as a good and earnest servant of the Government, intent on rendering more effective the work and machinery of the arsenal with which he was connected, and the work of so devising

a machine was not an obligation imposed upon him by the authorities of the arsenal.

IV.

The other inventions of the claimant, set forth in the patents enumerated in finding I, except that of the heading machine, which was fabricated and used by the defendants under the supervision of the claimant, were also brought to the attention of the various commanding officers by suggestions from the claimant for making the means and appliances at the arsenal more efficient than they were; and in like manner the cost of preparing patterns for the iron and steel castings and of preparing working drawings and of constructing working machines was borne exclusively by the Government; but the claimant did not use any property of the defendants, or the services of any employé of the defendants, in making or developing or perfecting the inventions themselves. In each case one or more machines, or articles of manufacture embodying the invention, had been constructed and was in operation or use in the arsenal with the claimant's knowledge and assent before he filed an application for a patent.

V.

In 1867, when the claimant made his first invention described in the patents hereinbefore enumerated, he was a machinist rated as a skilled laborer in the Frankford arsenal, but acting and doing the duty of a master armorer, on wages of $4 a day. From time to time his wages were advanced until they became, in 1881, $6 a day, and he was in 1881 appointed master armorer, the duties of which are a general supervision of the shops. This increase of pay and advancement of position came through and by authority of the commanding officers of the arsenal, and the consideration or reason therefor was that the claimant was a faithful, intelligent, and capable employé, whose services were of great value to the Government.

It was never stipulated by any commanding officer, nor understood or agreed to by the claimant, that the advance of wages was to be a consideration for the use of his inventions, though the practical ability of the claimant as an inventor, and the value of his inventions to the Government, did operate upon the minds of the officers in estimating the claimant's services and ordering his advancement.

VI.

The claimant has sold the right to use his inventions, reserving the right to the Government as set forth in finding VII, to various persons for sums amounting in the aggregate to $5,380. But the use of the inventions by private manufacturers is not nearly so large as the use by the Government, the inventions being specially adapted to military purposes and appliances.

VII.

In the year 1870 the claimant sold and assigned his invention for the cartridge-loading machine by the following instrument of assignment:

Whereas Jabez H. Gill, of Bridesburg, Philadelphia city, Pennsylvania State, did obtain letters patent of the United States of America for certain improvements in machines for loading cartridges, which letters patent bear date the fourteenth day of December, eighteen hundred and seventy-nine, and are numbered 97904; and whereas the Union Metallic Cartridge Company, of Bridgeport, Conn., are desirous of acquiring an interest therein:

Now, this indenture witnesseth, that for and in consideration of the sum of one thousand dollars to him, the said Jabez H. Gill, in hand paid, the receipt of which is hereby acknowledged, I have assigned, sold, and set over, and do hereby assign, sell, and set over unto the said The Union Metallic Cartridge Company, of Bridgeport, Conn., all the right, title, and interest which I have in the said invention, as secured to me by said letters patent, reserving to the United States the right to make and use said machine for their use forever, the same to be held and enjoyed by the said The Union Metallic Cartridge Company, of Bridgeport, Conn., subject to the above reservation, for their own use and behoof, and for the use and behoof of their legal representatives to the full end of the term for which said letters patent are granted, as fully and entirely as the same would have been held and enjoyed by me if this assignment and sale had not been made.

In the year 1877, the claimant sold and assigned his invention for the cartridge-weighing machine (patent 185,858) to the same company, by an instrument of assignment in like form, which contained the following reservation:

Reserving to the United States the right to make and use said improvement for their own use forever.

In the year 1878, the claimant sold and assigned to the same company his invention for a cartridge-gauging machine (patent 208,903), by an instrument in like form, and containing a reservation clause in the same words.

In the year 1880, the claimant sold and assigned to the same company his invention for the cartridge primer (patent 225,591), by an instrument in like form, and containing a reservation clause in the same words.

11 In the year 1882, the claimant sold and assigned to the firm of Hartley & Graham his invention for a cartridge-heading machine (patent 241,962), by an instrument in like form, which contained the following reservation clause:

Subject, however, to the right of the United States Government to make and use the said invention until the expiration of the term of said letters patent.

In the year 1882, the claimant also sold and assigned to Hartley & Graham his invention for capping and decapping cartridges (patent 257,860), by an instrument in like form, and which contained a reservation clause in the same words.

VIII.

Between the 4th July, 1878, and the 4th July, 1884, when this action was begun, the defendants manufactured the number of cartridges hereinafter set forth, using therefor the various inventions and devices of the claimant set forth in his letters patent, to the extent indicated in the following tables:

A.

Cartridges loaded, between July 4, 1878, and July 4, 1884, on one machine, built after application for patent	3,740,423
Cartridges weighed, between July 4, 1878, and July 4, 1884, on six machines, built after application for patent	27,797,257
Cartridges gauged, between July 4, 1878, and July 4, 1884, on two machines, built after application for patent	9,851,532
Anvils manufactured, between July 4, 1878, and July 4, 1884, and after application for patent	32,531,478
Cartridges headed, between July 4, 1878, and July 4, 1884, on one machine, built after applications for patent, none.	
Priming tools, manufactured between July 4, 1878, and July 4, 1884, and after application for patent	1,040

B.

Cartridges loaded, between July 4, 1878, and July 4, 1884, on nine machines	33,663,814
Cartridges weighed, between July 4, 1878, and July 4, 1884, on seven machines	33,663,814
Cartridges gauged, between July 4, 1878, and July 4, 1884, on six machines	33,663,814
Anvils	32,531,478
Cartridges headed, between July 4, 1878, and July 4, 1884, on three machines	16,166,564
Priming tools	1,040

Conclusion of Law.

The court decides as conclusion of law that the petition of the claimant should be dismissed.

12 VII.—*Opinion of the Court.*

NOTT, *J.*, delivered the opinion of the court:

The history of this case, which it is needless to repeat, will be found in the second, third, fourth, fifth, and sixth findings. We now proceed to consider the law by which it must be governed.

In Solomon's case (22 C. Cls. R., 335) this court said:

Upon the facts now found the court is of the opinion that where

an officer of the Government is properly assigned to the task of devising, preparing, or making an instrument, implement, or other subject of manufacture for the public service, and he does so, the Government bearing the expense of the experiments incidental to the invention and the cost of completing, perfecting, and testing the device, the officer receiving his salary for his services, a presumption of implied contract does not arise, and no action to recover a royalty for the use of the invention can be maintained.

The court also said:

It would be contrary to public policy, and to the principle which governs the transactions of guardian and ward, or of trustee and *cestui que trust.*, to allow an officer to take advantage of the trust confided to him. In such cases the law does not imply a contract.

The counsel for the claimant has pointed out several differences between the facts in the present case and those in Solomon's, on which it is forcibly insisted that a substantial distinction should be drawn. These differences have been carefully weighed by the court, and its views in regard to them will now be stated.

In Solomon's case it was found that the invention had been made by an officer of the Government and that he had used the means and appliances of the Government, and indeed of the bureau of which he was the chief, in his preliminary experiments. These means and appliances were trivial, the invention being merely a revenue stamp, and the means little more than a small quantity of the paper of which such stamps are made, with a perforation punched by machinery, and an engraved design printed on the stamp. But, nevertheless, the court held, and was justified in holding, that the Government had borne the expenses of the experiments incidental to the invention.

It must be conceded that the present case differs from Solomon's in that particular. In not one of the several inventions which form causes of action in this case does it appear that the claimant was indebted to the Government in the slightest degree for anything appertaining to his invention until he carried his design to the commanding officer. Up to that event the Government had aided him with neither time nor money, nor material nor assistants. Up to that moment he was truly and absolutely, legally and equitably, the master of his own device. The Government had contributed nothing and he owed the Government nothing. If he had continued to occupy that simple position not the shadow of a doubt could rest upon his absolute right to control his own invention.

But at this point a new policy began. The loading machine, which was the first and most important of the claimant's inventions, and which we take as illustrative of the case, was not a new chemical compound, the result of costly experiments as to which the Government might have contributed the laboratory and ingredients. It was, when brought to the commanding officer, simply the committal of a thought to paper. The claimant's counsel has dwelt earnestly upon the fact that it proved to be a perfect and completed invention, embodying no mistake, involving no alteration; and it was indeed like the loom of Bigelow, one of those wonderful instances

where the mind has thought out every detail of a complicated machine and arranged its parts, while yet they did not exist, with such precision that experiment performed no office save that of verifying the accuracy of the inventor's forecast.

Nevertheless the device belonged to a class of which nothing save failure could rationally be predicted. Its complicated parts depended so much on niceties of adjustment and absolute precision in the adaptation of means to ends that until brought to the test of actual application no one could say that the device was valuable or that it would not require years of modifying and perfecting
13 to make its value apparent. It proved to be valuable, and it required no costly alteration to make it such, yet when the inventor carried his drawing to the commanding officer neither party knew what the result would be.

From this point onward the case was somewhat like Solomon's; the Government bore the expense of bringing the invention to the test of practical operation; the claimant bore nothing; the Government contributed working plans, models, patterns, material, workmen, money; the claimant superintended the work of construction, and was paid for his services. When the supreme moment of practical success was reached the employé had not applied for a patent nor expended a dollar in the attainment of this end; the employer had borne the entire cost of the development, or demonstration, or experiment, or whatever it might be termed, had paid the employé for his services upon the work, and had with his assent developed the invention and made it valuable and put it at its intended work in the shops of the arsenal.

The question here is not whether these facts would constitute a defense to an action for infringement in the case of a machine constructed subsequently to the patent, but whether upon these facts the law will imply a contract, and if so, what contract.

Certainly as to the eight loading machines constructed prior to the application for a patent no contract can be implied. The counsel for the claimant has argued with great force that the drawing exhibited to the commanding officer was a completed and perfected invention, and that the action of the commanding officer in examining, approving, and using the proffered device constituted an implied contract. It is true that in one sense an invention may be said to exist when the idea flashes through the inventor's mind. Philosophically it may be said to be complete when it is materialized into a model, or drawing or other form intelligible to other minds. But such an invention is from a legal point of view an abstraction which does not draw to itself the attribute of property until a patent be granted, or at least an application for a patent be filed. Until then the abstraction is not property, and any one who may possess it may use it, and as to the specific thing so used the law will not consider him a wrong-doer or hold him liable though he continue the user after a patent be granted. (Rev. Stat., § 4899.)

In other words, when the claimant brought his drawing to the responsible chief of the arsenal, and when the Government constructed the eight loading machines which were constructed prior to the

patent, all that the claimant possessed was an idea to which he might some day attach the element of property. But he did not possess property; and until property exists it cannot be "taken" in the sense of the Constitution, nor be the subject of implied contract as between individuals.

The question then recurs as to the ninth loading machine manufactured and put in operation subsequently to the claimant's application for a patent.

In Solomon's case, as in this, that question came before the court, blended with the fact that the claimant there, like the claimant here, had been, at the time of the adoption of the device, an employé or agent of the Government, and the device was to be used in connection with his work, or in work with which his employment was connected. In Solomon's case the question was much plainer and the defense much stronger than they are in this. Here the
14 inventor was not the chief of the bureau in which the device was to be used; he had not been assigned to the duty of selecting a device; he did not withhold from the other officials, responsible for the selection, the fact that he was the inventor, and that the adoption of his device might involve the Government in legal liability. On the contrary, the claimant was a simple mechanic on daily wages, holding a subordinate position, charged with no responsibility save that of performing honestly his daily task, and his conduct was fair, honest, and irreproachable.

Therefore the relation of guardian and ward, or of trustee and *cestui que trust.* as between himself and the Government can hardly be said to exist. The question is narrowed down to this: whether an unpatented, undeveloped device, produced by an employé of the Government, proffered to the Government without reservation or condition, developed and brought to the test of practical use at the cost of the Government and with the consent of the inventor, will become the subject of an implied contract if the Government should extend its user of the invention by the construction of a new machine subsequent to an application for a patent. The question is a narrow one, and if there be a case wherein a court might well incline to a broad and liberal view of it it is the case of the present claimant.

The mind-work of the inventor is property within the intent of the Constitution, but it is property of the most elusive and intangible kind. It is something, but it is something which becomes property only by operation and through the intervention of law. Novelty is an ever-present essential in it, and its value is always speculative, conjectural, a think of the future and of the unknown, which may bring to the owner a vast fortune or loss and disappointment.

When the agent of the Government takes a horse or an ox for public use he knows what he is taking; he knows too that it is property and that it has a value in the actual experience of the men about him, though he and the owner may not be able to agree on the price. He knows, moreover, that by the taking the Government is acquiring something and that the owner is losing something,

and that the extent and value of this something are both susceptible of ascertainment. Concerning such a taking there can be no doubt that the one party will incur a liability and the other acquire a right of action. But when the inventor comes to the public agent as in this case, or as in Solomon's, bringing only an idea, proffering only a suggestion, the agent is not taking property and none exists for him to take. What he is doing is committing the Government to a new system, and entangling it in present expenses and future liabilities.

If the employé were to come with a patent in his hand, avowing his device to be property, seeking to dispose of it as such, and a responsible agent of the Government were to accept it, or adopt it and put it into the Government service, and the Government should derive a benefit therefrom, it might well be held that the mere employment of the inventor in the Government service should not nullify the implied sale. But the case before us does not contain these elements of property and bargain and sale; and while we believe that the inventor acted honestly and in good faith, it is nevertheless manifest that he took advantage of his employment to bring his device into the public service.

The court is of the opinion that public policy forbids that such transactions be allowed to ripen into public liabilities, and it is accordingly constrained to this conclusion, that where an employé of the Government takes advantage of his connection with the Government to introduce his unpatented device into the public service, he giving no intimation at the time that he regards it as property or that he intends to protect it by letters patent, but allowing the Government to test the invention, at its own exclusive cost and risk, by constructing machines and bringing it into practical use before he applies for a patent, the law will not imply a contract; neither will a contract be implied in favor of the employé who has thus placed a patentable device in the public service as to machines constructed and used after his patent has been obtained.

If the court be in error in this conclusion, there still remains an important question in the case which goes directly to the right of recovery.

Patent rights now form the subject of action in two distinct classes of cases, that is to say, cases where the action is upon the patent and may involve a question of validity, infringement or right, and cases where the action is to recover an agreed compensation for the use of the patent property in the form of a royalty or license fee. The former are for the infringement of a right and are in their nature torts; the latter are *ex contractu*.

These two classes of cases are so distinct, that since the decision in Hartell *v.* Tilghman (99 U. S. R., 547), it has been regarded as settled that the State courts have jurisdiction of the latter, though not of the former, and, conversely, that the United States courts, while they have jurisdiction of the former, do not have jurisdiction, as subjects of patent law, of the latter. (Albright *v.* Teas, 106 U. S. R., 613; Dale Tile Co. *v.* Hyatt, 125 *id.*, 46.) In this court patent jurisdiction is essentially that of the State courts (amplified by ju-

risdiction of cases of implied contract), though in substantially every case that has been before us the action has been more or less confused with actions for infringement, both as to the extent of the liability and the measure of damages.

During the last quarter of a century there have been but two cases where a patentee has actually recovered a judgment upon an implied contract, and in both of those the highest executive authority invited inventors to exhibit their designs as a subject of purchase and sale, and the inventors exhibited them as property, and the Government accepted and adopted and used them as such. (McKeever's case, 14 C. Cls. R., 396; affirmed without opinion October term, 1882; Palmer's case, 20 *id.*, 432; affirmed, 128 U. S. R., 269.)

For the purposes of this inquiry it may be conceded that if the construction of the ninth loading machine had been by an ordinary person, an action for an infringement could be brought against him. But in these cases against the Government the element of contract comes in and the element of tort must be excluded. It is as if the parties had expressly agreed that the taking of the property or thing should not be deemed tortious, and that where the validity of the patent is attacked, it shall come in as if the suit were on an express contract with a warranty and the defendants were setting up a failure of consideration. Accordingly if the facts are such that a contract may be implied in these cases, the law will imply one.

But the implication must be drawn from all the facts of the case, and the contract implied must give effect as nearly as may be to the supposed intent of the parties. It is not the case of the dis-
16 possessed owner of property waiving a tort and suing in contract; it is the case of an owner offering his goods to a purchaser upon undefined terms, and who consequently cannot now maintain an action of trover or replevin. The contract to be implied is one which ought to be inferred from all the facts of the case, recognizing a mutual intent in both parties and giving due regard to the rights of each.

Now, in this case before us, the defendants, not wrongfully, but at the invitation of the claimant, with his consent and by his solicitation, took his unpatented, untried, unknown device, and by bringing it to a successful, practical result, imparted to it a value it had never had before. The defendants did this at their own cost, and assumed exclusively the risk that their outlay might be thrown away and the experiment end in failure.

The claimant gave nothing, contributed nothing, assumed nothing. And, according to his theory of the transaction, he was to give nothing, was to contribute nothing, was to assume nothing. The agreement, which he would have the law make for both parties, was to be entirely unilateral; the defendants were to expend money in building a machine which should test the invention; the claimant was to continue free to bring that state of affairs to an end at any moment by the single expedient of filing his application for a patent when he would be able to stop the completion of the machine they

were building, and impose his own terms for the right to use his invention.

It seems manifest to the court that this would be a contract which the law ought not to imply, and that it would be the result of confusing the law of contract with the law of tort. The court cannot look to the law of contract when dealing with the question of jurisdiction, and to the law of tort when dealing with the measure of damages. If the transaction was one of contract *ab initio*, what was it that the inventor undertook to sell and the manufacturer to buy? If it was simply the thing as it stood, an unpatented, untried invention, without reference to a patent being taken out by either party, the mere disclosure of a secret, the damages must needs be simply for the disclosure of the secret, and in such a case as this exceedingly small.

The measure of damages in a case of implied contract is the market value of the thing at the time, not the value which subsequent transactions may attach, or subsequent events disclose. If the subject of bargain and sale was the invention considered as a patentable device, what reason is there for supposing that it was within the mutual intent of the parties that the seller should be at liberty to take out a patent and exclude the buyer from the use of the invention, any more than that the buyer should take out the patent and exclude the seller from all rights in the device?

To the court it seems more reasonable to hold that if a contract is to be implied it should be implied from the whole transaction, and that the whole transaction leads to the conclusion that it was the intent of the parties that the defendants should bear the cost and risk incident to making the device valuable by bringing it to the test of practical success in their own business, and that the inventor should allow an unrestricted right to use it, not, perhaps, generally, but certainly in the business in which he voluntarily placed it.

The judgment of the court is that the petition be dismissed.

17 VIII.—*Judgment of the Court.*

JABEZ H. GILL
vs.
THE UNITED STATES. } No. 14491.

At a Court of Claims held in the city of Washington on the 6th day of April, A. D. 1891, judgment was ordered to be entered as follows:

The court, on due consideration of the premises, find for the defendants and do order, adjudge, and decree that the petition of the claimant, Jabez H. Gill, be dismissed.

BY THE COURT.

18 IX.—*Claimant's Application for Appeal to Supreme Court and Allowance of Same.*

JABEZ H. GILL
vs.
THE UNITED STATES. } No. 14401.

Now comes the claimant, by H. E. Paine, his attorney, and makes application for appeal to the Supreme Court of the United States from the judgment herein rendered on the 6th day of April, 1891.

H. E. PAINE,
Claimant's Att'y.

Filed and allowed in open court May 14, 1891.

WILLIAM A. RICHARDSON,
Chief Justice.

19 In the Court of Claims.

JABEZ H. GILL
vs.
THE UNITED STATES. } 14401.

I, John Randolph, assistant clerk of the Court of Claims, do hereby certify that the foregoing are true transcripts of the pleadings in the above-entitled cause, of the findings of fact filed by the court and the conclusion of law thereon, of the opinion of the court, of the judgment of the court, of the application for and allowance of an appeal to the Supreme Court of the United States.

In testimony whereof I have hereunto set my hand and affixed the seal of the Court of Claims, at Washington city, this 29th day of January, A. D. 1892.

Seal Court of Claims.

JOHN RANDOLPH,
Ass't Clerk Court of Claims.

Endorsed on cover: Case No. 14,971. Court of Claims. Term No., 366. Jabez H. Gill, appellant, *vs.* The United States. Filed January 30, 1892.

Office Supreme Court, U. S.
FILED.
OCT 18 1895
JAMES H. MCKENNEY,
CLERK.

Supreme Court of the United States.

OCTOBER TERM, 1895.

No. 85.

JABEZ H. GILL, APPELLANT,

v.

THE UNITED STATES.

Appeal from Court of Claims.

BRIEF FOR APPELLANT.

H. E. PAINE,
Counsel.

WASHINGTON, D. C.:
GIBSON BROS., PRINTERS AND BOOKBINDERS.
1895.

Supreme Court of the United States.

OCTOBER TERM, 1894.

JABEZ H. GILL,
APPELLANT,

v.

THE UNITED STATES.

No. 366.

Appeal from the Court of Claims.

Brief for Appellant.

STATEMENT.

The claimant sued the United States in the court of claims, on an implied contract, for the use of six inventions covered, respectively, by letters patent Nos. 97,904; 185,858; 208,903; 220,472; 241,962 and 257,860. The trial of the cause having proceeded so far as to disclose the relation which the appellant sustained to the government, as an employé in the Frankford Arsenal, when he made the inventions for the use of which he seeks compensation, the court interrupted the proceedings to consider and decide the question whether the appellant's

relations to the government precluded a recovery; and, having decided that question in the affirmative, dismissed the petition, without a full hearing of the cause. The other facts in the case are fully stated in the findings of the court of claims.

ARGUMENT.

I.

The legal principles which are decisive of this case were stated, with precision, by the supreme court, for the first time, in Solomons *v.* United States, 137 U. S. 342, decided December 8, 1890. If a judgment for the appellant, in the case at bar, is not warranted by the opinion of the supreme court in that case, the judgment of the court of claims must be affirmed. In that case the supreme court announced the general rule applicable to cases of inventions by employés of the government, and also two limitations of that general rule. The general rule is stated as follows:

> The government has no more power to appropriate a man's property invested in a patent than it has to take his property invested in real estate; nor does the mere fact that an inventor is, at the time of his invention, in the employ of the government, transfer to it any title to or interest in it. An employé performing all the duties assigned to him, in his department of service, may exercise his inventive faculties in any direction he chooses, with the assurance that whatever invention he may thus conceive and perfect is his individual property. There is no difference between the government and any other employer in this respect.

The two limitations of this general rule are stated as follows:

> (1.) If one is employed to devise or perfect an instrument or a means, for accomplishing a prescribed result, he cannot, after successfully accomplishing the work for which he was employed, plead title thereto, as against his employer. That which he has been employed and paid to accomplish becomes, when accomplished, the property of his employer. Whatever rights, as an individual, he may have had to his inventive

powers and that which they are able to accomplish, he has sold, in advance, to his employer.

(2.) Where one is in the employ of another, in a certain line of work, and devises an improved method or instrument for doing that work, and uses the property of his employer and the services of other employés, to develop and put in practicable form his invention, and explicitly assents to the use, by his employer, of such invention, a jury or a court, trying the facts, is warranted in finding that he has so far recognized the obligations of service, flowing from his employment and the benefits resulting from his use of the property and the assistance of the co-employé of his employer, as to have given to such employer an irrevocable license to use such invention.

The findings of fact show that neither of the limitations, defined by the supreme court, in Solomons' case, can be interposed, in this case, to bar or impair the appellant's right to compensation for the use of his inventions.

First. The appellant, in the case at bar, was not employed by the United States to devise or perfect either one of the inventions under consideration. The first finding of the court of claims contains the following statement of facts (Record, page 4):

During the period of time, within which the claimant invented the devices hereinafter mentioned, he was in the defendants' employment and received wages, or a salary, for his services. The terms of his employment required him to exercise his mechanical skill, in the service of the defendants, *but did not require the exercise of his inventive genius in such service, nor secure to the defendants the right to use any inventions of the claimant, without compensation therefor.*

The third finding of the court of claims contains the following statement of facts (Rec. p. 5):

The claimant was not employed to make inventions, nor assigned to that duty, and his invention, until it was reduced to paper, in the form of an intelligible drawing, was made out of the hours of labor at the arsenal, and during the time which was properly his own; and the thought and time, which he devoted to it, were voluntarily given as a good and earnest servant of the government, intent on rendering most effective the work and machinery of the arsenal, with which he was connected; and the work of so devising a machine *was not an obligation* imposed upon him by the authorities of the arsenal.

In the opinion, (Rec. p. 11) the court of claims, referring to Solomons' case, which had been decided by that court, but not by the supreme court, said:

In Solomons' case the question was much plainer and the defence much stronger than they are in this. Here the inventor was not the chief of the bureau in which the device was to be used; he had not been assigned to the duty of selecting a device; he did not withhold from the other officials, responsible for the selection, the fact that he was the inventor, and that the adoption of his device might involve the government in legal liability. On the contrary the claimant was a simple mechanic, on daily wages, holding a subordinate position, charged with no responsibility save that of performing honestly his daily task, and his conduct was fair, honest and irreproachable. * * * The question is a narrow one and if there be a case, wherein a court might well incline to a broad and liberal view of it, it is the case of the present claimant.

Second. The second limitation to the general rule, defined by the supreme court, consists of a combination of four elements, as follows:

(1.) The employment of the inventor in a certain line of work.

(2.) The device, by the employé, of an improved method, or instrument for doing that work.

(3.) The use of the property of the employer and of the services of other employés, to develop and put in practicable form the invention.

(4.) The inventor's explicit assent to the use of the invention by the employer.

The first and second elements of this combination are present in the case at bar; but the third is wanting; the claimant never assented to the gratuitous use of his inventions, and the combination itself, of which these latter elements are essential features, does not exist to limit the employé's right to compensation under the general rule laid down by the supreme court.

That the appellant did not use the property of the United States or the services of other employés, to develop and put in practicable form his invention, is shown by the record. The third finding of fact contains the following words (Rec. p. 5):

His invention, until it was reduced to paper, in the form of an intelligible drawing, was made *out of the hours of labor at the arsenal*, and during the time which was properly his own.

The fourth finding of facts contains the following statement (Rec. p. 6):

The claimant did not use any property of the defendants or the services of any employé of the defendants, in making, or developing, or perfecting the inventions themselves.

The second finding of facts contained the following statement (Rec., p. 5):

In 1867, the claimant, being a machinist or skilled mechanic, in the Frankford Arsenal, and getting a compensation of $4 a day, came to General Benét, the commanding officer, and suggested that an improvement could be made in the method of loading cartridges, and exhibited to the commanding officer, then or subsequently, his device for an improvement which is now embodied in patent No. 97,904. General Benét, *after due examination and consideration*, authorized the construction of such a machine. The machine was built, at a cost of $500, by the United States, *according to the design of the claimant. On its completion it proved to be thoroughly satisfactory* to the commanding officer, who authorized the construction of a second machine. The construction of both took place under the immediate supervision of the claimant, and such supervision was a part of his ordinary duty and employment. Subsequently successive commanding officers ordered, from time to time, six other machines to be constructed, which, in like manner, were built under the immediate supervision of the claimant; and all these eight machines were completed prior to the claimant filing his application for a patent. After his patent had been issued a ninth machine was also ordered, and, in like manner, constructed, under the immediate supervision of the claimant. *These machines* have been used by the government at the Frankford Arsenal, in the manufacture of cartridges, *and continue in use to the present time.*

In the opinion (Rec. p. 9) the court of claims said:

It must be conceded that the present case differs from Solomons' in that particular. In not one of the several inventions, which form causes of action in this case, does it appear that the claimant was indebted to the government, in the slightest degree, for anything appertaining to his invention, until he carried his design to the commanding officer. Up to that event the government had aided him with neither time, nor money, nor material, nor assistants. Up to that moment he was truly and absolutely, legally and equitably, the master of his own device. The government had contributed nothing, and he owed the government nothing. If he had continued to occupy that simple position, not the shadow of a doubt could rest upon his absolute right to control his own invention. But, at this point, a new policy began. The loading machine, which was the first and most important of the claimant's inventions, and which we take as illustrative of the case, was not a new chemical compound, the result of costly experiments, as to which the government might have contributed the laboratory and ingredients. It was, when brought to the commanding officer, simply the committal of a thought to paper. The claimant's counsel has dwelt earnestly upon the fact that it proved to be a perfect and completed invention, embody-

ing no mistake, involving no alteration. And it was, indeed, like the loom of Bigelow, one of those wonderful instances where the mind has thought out every detail of a complicated machine, and arranged its parts, while yet they did not exist, with such precision that *experiment performed no office save that of verifying the accuracy of the inventor's forecast.*

In Solomons' case, the supreme court indicates, as the third element of the second limitation to the general rule, the use, by the inventor, of "the property of his employer and the services of other employés to *develop and put in practicable form his invention.*" It is respectfully submitted that this language of the supreme court refers to the use of the employer's men and means, not merely in *constructing* the *machine*, or *manufacturing* the *product*, but in *perfecting*, that is to say, *making the invention* itself. That such must have been the meaning of the supreme court is manifest from two distinct considerations.

(1) In the first place, while it is true that constructed machines may constitute the means, or stepping-stones, whereby an imperfect, incomplete invention may be carried forward to a perfect and completed state, it is not true that, after an invention is perfected and completed, the *construction* of a machine can perfect and complete such invention; it is not true that the *construction* of the machine can have any part in the *making* of such an invention. In the case at bar the inventions were all completed and perfect before the machines were constructed, and the construction of the machines had therefore nothing whatever to do with the making of the inventions. To *develop* an invention is to advance that invention from one stage to another towards perfection, each stage being preparatory to the next. In the case of an imperfect and incomplete invention, constructed machines may disclose the imperfections of the device, and so contribute to the development of the invention itself. But if the invention is already completed and perfect, as in the case at bar, there

is no room for development, and the *construction* of the machine performs no function in the development of the invention.

Now it is true that the government constructed all the machines involved in this case. It is true that the government furnished all the money, material and labor used in the *construction* of these *machines*. But it is not true that the government furnished any money, material, or labor, used in *making* or *developing* either one of the inventions. The government constructed the machines; the appellant made and developed the inventions. In the case of "a perfect and completed invention, embodying no mistake, involving no alteration," "where the mind has thought out every detail of a complicated machine, and arranged its parts, while yet they did not exist, with such precision that experiment performed no office save that of verifying the accuracy of the inventor's forecast,"—in such a case the *construction* of the machine so invented constitutes no part whatever of the work of invention.

It is to be observed that the models, made at the expense of the government, were not models for the patent office, but were merely patterns for the molders used in casting parts of the machine.

(2) But, in the second place, it becomes necessary to ascertain the effect of the words "to put in *practicable* form his invention." The supreme court uses the word "*practicable*," not the word "*material*." The difference between these two words, in this connection, is radical. To put a machine-invention in *material* form is merely to construct a machine in conformity with the drawings and specifications. The invention may still be absolutely *impracticable* and useless. In the case at bar the government certainly did put each and all of the inventions in controversy in *material* form; but never, in a single in-

stance, did it put them, or in the slightest degree contribute towards putting them, in *practicable* form. An invention, put in *practicable* form, is an invention which accomplishes its object. A machine invention put in *material* form is an invention translated from the drawings and specifications into material construction. It may or may not accomplish its object.

It is obvious, then, that when the supreme court, in Solomons' case, referred to the construction of a "*practicable invention*," as an element of one of the limitations to the general rule laid down, what was said was exactly what was meant,—that the court did not mean that the contribution of money, material and labor, by an employer, for the mere construction of a *machine* in a *material* form, would impair the inventor's right to compensation for its use.

That the appellant never assented to the gratuitous use of his inventions by the United States is shown by the record. The fact is that he assented to their use, without either waiving or claiming compensation. On this point both parties were absolutely silent. And it is evident that an employé's right to compensation for the use of his invention is not destroyed by the fact that he explicitly assents to its use, by his employer, *without* either expressly *waiving* or expressly *claiming* compensation for its use. Indeed the court of claims holds that the assent of the inventor, to the use of his invention by the government, is *essential to his right to recover*,—is necessary in order to make the case an action *ex contractu*, instead of an action *ex delicto*.

As already stated for another purpose, the first finding of fact included the following clause (Rec., p. 4):

> The terms of his employment required him to exercise his mechanical skill, in the service of the defendants, but did not require the exercise

of his inventive genius in such service; *nor secure to the defendants the right to use any inventions of the claimant, without compensation therefor.*

The third finding of fact contains the following statement (Rec., p. 5):

Nor did he ever enter into any express agreement, written or oral, whereby a license was granted, or intended to be granted, to the government, to operate and use the machine described in the preceding finding, or *whereby the claimant waived, or intended to waive, his legal or equitable right, if any, to compensation.*

The fifth finding of fact contains the following statement (Rec., p. 6):

It was never stipulated, by any commanding officer, nor understood or agreed to by the claimant, that the advance of wages was to be a consideration for the use of his inventions, though the practical ability of the claimant, as an inventor, and the value of his inventions, to the government, did operate upon the minds of the officers, in estimating the claimant's service and ordering his advancement.

II.

But, inasmuch as the supreme court held the case of McClurg *v.* Kingsland, 1 How. 202, to be decisive of Solomons' case, it becomes important to ascertain the precise point decided in the former case. It had long been a desideratum to discover some method for casting chilled-iron rollers, by which the dross might be thrown to the axis of the roller and the best metal to its cylindrical surface, which surface is the working part of the roller. Harley invented a method by which the metal was so introduced into the mould as to take a rotary motion, around the axis of the roller, which motion threw the heaviest and best part of the metal to the surface and the lightest part and the dross to the centre. Harley made this invention, in the foundry of the defendants, where he was employed. He made it as the result of a series of experiments, using the furnace, the iron, the moulds, the tools and the building of the defendants. These experiments were expensive.

At first they were failures; but finally he succeeded. He worked at the manufacture of rollers, for the defendants, in their foundery some months after his successful experiment was made. Having obtained letters patent he assigned his patented invention. The defendants continued to manufacture rollers, and were sued by Harley's assignee. The supreme court held that the facts above stated constituted an implied license to use the invention.

In this case of McClurg *v.* Kingsland, the inventor used the property and labor of his employers, not merely to construct or manufacture a machine or product covered by an invention, which he had already perfected, but to develop, by experiment, from one stage to another, and finally make perfect and complete, the invention itself. By means of his experiments, unsuccessful at first, he discovered at last, a satisfactory solution of the problem. *He used the men, money and material of the defendants, not merely in the construction of a machine, or in the manufacture of a product, but in making the invention itself.* But this was all different in the case at bar. How different it was is best shown in the words of the court of claims, already quoted on pages 3, 4, 5 of this brief.

In Solomons *v.* United States the supreme court, referring to the case of McClurg *v.* Kingsland, said—

> That case was decisive of this. Clark was in the employ of the government when he made this invention. His experiments were wholly at the expense of the government. He was consulted as to the proper stamp to be used, and it was adopted on his recommendation. He notified the government that he would make no charge, if it adopted his recommendation and used his stamp; and for the express reason that he was in the government employ, and had used the government machinery in perfecting his stamp. He never pretended personally to make any charge against the government. Indeed there is but one difference between that case and this: In that Harley's wages were increased, on account of his invention; in this Clark's were not, but such difference does not seem vital.

No such facts appear in the case at bar. The manner in which the appellant's inventions originated and came

into the use of the government, is shown in the second and fourth findings of fact.

The record shows that these inventions were all perfect and completed inventions, when presented to the commandant; that they have never, in a single instance, been improved or modified, either in the respective machines first constructed, or products first manufactured, or in any machines subsequently constructed, or products subsequently manufactured. The appellant made no experiment at the expense of the government. He was not consulted, in advance, in the selection of any device proper for the use of the government. In every case he brought to the commandant, in the first instance, a perfect and completed invention, which was never thereafter improved or changed. Not one of his inventions was adopted on his recommendation. Every one was adopted by the commandant of the arsenal on his own judgment, "after due examination and consideration." He never notified the government that he would make no charge for the use of his inventions, if the government would adopt them.

III.

If the opinion of the court of claims was correctly predicated upon its finding of facts, then the use of the appellant's inventions, which saved to the government millions of dollars, was acquired *wholly and absolutely without consideration*. The inventions were all perfect and complete before they were embodied by the government in constructed machines, or in manufactured products. The appellant did not make the inventions in working hours, or at the arsenal, but made them in his own time and, as the testimony shows, in his own house. No materials or workmen of the government were used in making or de-

veloping or perfecting the inventions. In every case the first machine constructed was perfect. No change was subsequently made in one of them.

It ought to be a very clear and very sharply defined technical defense to warrant such injustice as would be involved in the gratuitous use of these inventions by the United States.

IV.

In the printed opinion of the court of claims the reasoning of the court is addressed to the question whether an employé of the government is entitled to compensation for the use of an invention *developed at the cost of the government.* But in the fourth "finding of facts," as amended, the court "finds" that "The claimant did not use any property of the defendants, or the services of any employé of the defendants, in *making*, or *developing*, or *perfecting* the inventions themselves." This opinion was delivered before Solomons' case was decided by the supreme court, and also before the fourth finding was amended by the insertion of the clause just quoted. The question to which the reasoning of the opinion is addressed is not presented by the record. The reasoning of the court, on this question, is not only *contradictory to the finding of fact*, but also inconsistent with many statements in the opinion itself. The supposed question is stated, in the words of the court, as follows (Rec., p. 11):

> The question is narrowed down to this: whether an unpatented, *undeveloped* device, produced by an employé of the government, proffered to the government without reservation or condition, *developed* and brought to the test of practical use *at the cost of the government*, and with the consent of the inventor, will become the subject of an implied contract if the government should extend its user of the invention, by the construction of a new machine subsequent to an application for a patent. The question is a narrow one; and if there be a case wherein a court might well incline to a broad and liberal view of it, it is the case of the present claimant.

A careful analysis of the reasoning of the court on this question will disclose the fact that the following were, in substance, the grounds on which was based the opinion that the question involved in the case was that which was defined, as above, by the court:

(1) That the appellant's inventions "belonged to a class of which nothing save failure could rationally be predicted," and when the inventor carried his drawings to the commanding officer, "neither party knew what the result would be."

(2) That the government *developed* the inventions and created their value.

(3) That the appellant, not having obtained or applied for letters patent, when he tendered his inventions to the government, possessed no property therein which could *become the subject of an implied contract.*

1. The six inventions, for the use of which the appellant seeks compensation, are the loading machine, the weighing, heading and gauging machines, the priming tool and the cartridge-anvil. The loading machine is certainly a complicated machine. But the other three machines are not in the slightest degree complicated. The priming tool is a mere hand-tool, as free from complication as a screw-driver. The cartridge-anvils are small pieces of metal, less than one-eighth of an inch in their largest dimension, which are inserted in the percussion caps, after the fulminate is placed therein. Upon the anvil the fulminate is exploded by the blow of the hammer, communicated through the firing pin. *The largest item in the appellant's demand is that which covers this anvil.* The anvil is not a complicated machine like the loading machine. It is not a machine at all. It is a product, and that of the simplest form. And yet the court of claims dismissed the petition of the appellant,

not only as to the complicated loading machine, but also as to the cartridge-anvil, the priming tool and the gauger, weigher and header, although the *reasoning of the court, in support of the dismissal, is based wholly upon considerations which are only applicable to the loading machine.*

Placing one of these little anvils on a sheet of white paper, in order to make it distinctly visible, without the aid of a microscope, let us, in its presence, read, from the opinion of the court of claims, the reasoning which sealed its doom in that tribunal. The court said:

> The loading machine, which was the first and most important of the claimant's inventions, and *which we take as illustrative of the case*, was not a new chemical compound, the result of costly experiments, as to which the government might have contributed the laboratory and ingredients. * * * The claimant's counsel has dwelt earnestly upon the fact that it proved to be a perfect and completed invention, embodying no mistake, involving no alteration. And it was indeed, like the loom of Bigelow, one of those wonderful instances where the mind has thought out every detail of a complicated machine, and arranged its parts, while yet they did not exist, with such precision that experiment performed no office save that of verifying the accuracy of the inventor's forecast.
>
> Nevertheless *the device belonged to a class of which nothing save failure could rationally be predicted.* Its complicated parts depended so much on niceties of adjustment and absolute precision in the adaptation of means to ends, that, until brought to the test of actual application, *no one could say that the device was valuable*, or that it would not require years of modifying and perfecting to make its value apparent. It proved to be valuable, and it required no costly alteration to make it such; yet when the inventor carried his drawing to the commanding officer, *neither party knew what the result would be.* When the supreme moment of practical success was reached the employé had not applied for a patent nor expended a dollar in the attainment of this end; the employer had borne the entire cost of the *development, or demonstration, or experiment, or whatever it may be termed.*

This interchange of the terms "development," "demonstration" and "experiment" involves the case in error. To *develop* an invention is to *perfect*, that is to say, *make* an invention. To demonstrate, by experiment, the value or success of an invention is something very different. The statements in the opinion flatly contradict the findings of facts. In the opinion it is asserted that the employer had *developed* the invention. But the finding of

fact is that "the claimant *did not use* any property of the defendants or the services of any employé of the defendants, in making, or *developing*, or perfecting the inventions themselves."

The extracts just read from the opinion of the court of claims exhibit the ground on which the judgment of dismissal, not only as to the loading machines, but as to all the other devices, was largely based, in the court below. It is, in substance, that none of the appellant's inventions possessed any value, until their value was *created*, or *demonstrated*, by their embodiment in working constructions, by the United States, because the invention of the *loading machine* "belonged to a class of which nothing save failure could rationally be predicted."

Now, if what the court meant, as to the loading machine, had been merely that persons not skilled in the art, or not possessed of natural aptitude for the comprehension of mechanical drawings, would have been unable to predict the success of the appellant's invention of the loading machine, the court was certainly right. Such persons would not have been able to predict for the loading machine either success, or failure; nor, indeed, to predict anything else material in the eye of the law, for, in such case, the law makes of such persons no account whatever. But, if the court meant to express the opinion that persons skilled in the art, like Gen. Benét, upon an examination of the appellant's drawings and description, could not have rationally predicted success for the loading machine, the opinion was certainly erroneous.

But the question is not what persons skilled, or not skilled, in the art might, or might not, have predicted for the appellant's inventions. The question is not whether the inventions, shown in his drawings and descriptions, belonged to classes which are usually imper-

fect or incomplete. The real question is whether these inventions themselves were, or were not, in fact, perfect devices, when presented to the commandant of the arsenal. For, *if the inventions were then perfect and complete, it cannot be true that the government afterwards made them perfect and complete.* This question is settled by the fourth finding of fact as follows (Rec., p. 6):

> The claimant did not use any property of the defendants or the services of any employé of the defendants, in making, or developing, or perfecting the inventions themselves.

This statement of fact was emphasized in the opinion, as follows (Rec., p. 9):

> In not one of the several inventions which form causes of action in this case does it appear that the claimant was indebted to the government in the slightest degree for anything appertaining to his invention until he carried his design to the commanding officer. Up to that event the government had aided him with neither time nor money, nor material nor assistants. Up to that moment he was truly and absolutely, legally and equitably, the master of his own device. The government had contributed nothing and he owed the government nothing. * * *

But then the transfer of this opinion from the complicated loading machine to the cartridge anvil and other devices cannot be justified.

The reasoning of the court is, in substance, this:

It was impossible to predict success, or value, for the invention of the claimant's *loading machine,* before its value was practically demonstrated, by the use of a successful constructed machine, *because that was a very complicated machine.* Therefore the *demonstration* of its value was really the *creation* of the value of *that machine.* And therefore the *demonstration* of the value of the *cartridge anvil, which was not a complicated machine,* but was a mere product of the simplest form, was the *creation* of the value of the *anvil.*

This reasoning from the loading machine to the anvil does not seem to be very logical, or very fair to the claimant. If there are no better reasons for the judgment of

the court below as to the anvil, priming tool, header, weigher and gauger, than those which were assigned by the court of claims, the judgment evidently ought to be reversed as to those devices, even though affirmed as to the loading machine.

V.

The second point, in the reasoning of the court, is stated as follows (Rec., p. 10):

> From this point onward the case was somewhat like Solomons': the government bore the expense of bringing the invention to the test of practical operation; the claimant bore nothing; the government contributed working plans, models, patterns, material, workmen, money; the claimant superintended the work of construction, and was paid for his services. When the supreme moment of practical success was reached, the employé had not applied for a patent, nor expended a dollar in the attainment of this end; the employer had borne the entire cost of the *development, or demonstration, or experiment, or whatever it may be termed*, had paid the employé for his services upon the work, and had, with his assent, *developed the invention* and made it valuable, and put it at its intended work, in the shops of the arsenal.

The question, then, to which the reasoning of the court of claims was addressed in the case at bar, was this: whether an undeveloped, (that is to say an imperfect and incomplete) invention, made by an employé of the government, offered to the government without reserve or condition, subsequently developed, (that is to say made perfect and complete), at the cost of the government, and first embodied in a constructed machine at the cost of the government, before patent granted, with the consent of the inventor, can become the subject of an implied contract, when embodied in a machine constructed after the application for letters patent is filed. But this was not the question which the findings of fact in the case presented. The question presented by the findings of fact was whether an invention *which was made perfect and complete by the inventor*

himself, an employé of the government, and was offered, for the use of the government, without express stipulation as to compensation for its use, and before patent granted was embodied in the first constructed machine, at the cost of the government, with the consent of the inventor, could be the subject of an implied contract when embodied in a machine constructed after the application for letters patent was filed.

The court mistook the construction of the first machine, by the mechanic, for a step in the work of the inventor. It confounded the construction of the machine with the making or development of the invention itself. It was of the opinion that a perfect, completed invention could not be the subject of an implied contract, until embodied in a constructed machine.

The fundamental error in all this is the theory that the *construction* of the first *machine*, or of any other machine, embodying a perfect and completed invention, is a step in the *making* of the *invention* itself. Of course the practical operation of a machine embodying a perfect and completed invention "shows or demonstrates," to the onlooker, that the invention is perfect and complete. But this is wholly immaterial. If the appellant's inventions were, in fact, perfect and complete the effect upon spectators was of no account. The machines were not constructed for the enlightenment of spectators or of anybody else. They were constructed for use. If the inventions were already perfect and complete, the workmen who constructed the first machines, in accordance with the drawings and description of the inventor, performed no part whatever in *making* the invention, or in *developing* it from one stage to another towards perfection and completion. Great mechanical skill may have marked their accurate translation of the inventions from the in-

ventor's drawings and description into the concrete forms of constructed machines; but no inventive genius was employed in that work. The pivotal question in the case is whether the fact that the first machines, embodying perfect and completed inventions, were constructed at the cost of the government, with the consent of the inventor, before the application for letters patent were filed, precluded the possibility of an implied contract for compensation for the use of machines constructed after the applications were filed.

The patentee, *as such*, confers upon the licensee the right to use, not the machine embodying his invention, but his invention embodied in the machine. The invention itself is the work of the inventor. The machine is the work of the mechanic who constructs it. The patentee may also be the constructor. In that case he sells the right to use the invention as patentee; but he sells the machine itself as constructor. If the invention is already perfect and complete, as in the case at bar, the constructor of the first machine takes no part in the development or perfecting of the invention. The court of claims finds that the appellant's inventions were perfect and complete when presented to the notice of the commandant of the arsenal, and then proceeds to base its reasoning, in the case, upon the theory that these inventions were developed by the construction of the first machines. That is to say the court, having found that the inventions *were* perfect and completed inventions, bases its reasoning upon the theory that they *were not* perfect and completed inventions. In its reasoning the opinion assumes that the appellant developed his inventions at the cost of the United States; but in the fourth finding of facts, it is expressly stated that "the claimant did not use any property of the defendants or the services of any employé of the defendants, in making or developing or perfecting the inventions themselves."

VI.

The third point in the reasoning of the court is stated as follows (Rec., pp. 10, 11):

> The counsel for the claimant has argued, with great force, that the drawing exhibited to the commanding officer was a completed and perfected invention, and that the action of the commanding officer, in examining, approving and using the proffered device, constituted an implied contract. It is true that, in one sense, an invention may be said to exist when the idea flashes through the inventor's mind. Philosophically it may be said to be complete when it is materialized into a model, or drawing, or other form intelligible to other minds. But such an invention is, from a legal point of view, an abstraction which does not draw to itself the attribute of property, until a patent be granted or at least an application for a patent be filed. Until then the abstraction is not property; and any one who may possess it may use it, and, as to the specific thing so used, the law will not consider him a wrong-doer, or hold him liable though he continue the user after a patent be granted (Rev. Stat. § 4899). In other words, when the claimant brought his drawing to the responsible chief of the arsenal and when the government constructed the eight loading machines, which were constructed prior to the patent, all the claimant possessed was an idea to which he might some day attach the element of property. But he did not possess property; and, until property exists, it cannot be "taken," in the sense of the constitution, *nor be the subject of implied contract*, as between individuals.
>
> When the agent of the government takes a horse or an ox for public use he knows what he is taking; he knows too that it is property and that it has a value in the actual experience of the men about him, though he and the owner may not be able to agree on the price. He knows, moreover, that by the taking the government is acquiring something and that the owner is losing something, and that the extent and value of this something are both susceptible of ascertainment. Concerning such a taking there can be no doubt that the one party will incur a liability and the other acquire a right of action. But when the inventor comes to the public agent as in this case, or as in Solomons', bringing only an idea, proffering only a suggestion, the agent is not taking property and none exists for him to take.

The court of claims, then, expresses the opinion that "an invention is, from a legal point of view, an abstraction, which does not draw to itself the attribute of property, until a patent is granted, or at least an application for a patent filed;" and that, therefore, when the appellant offered his inventions to the government, he held no property therein capable of becoming "*the subject of an implied contract.*" In the opinion of the court of claims,

acts of parties, performed before patents are granted, or applications filed, can not raise an implied contract for the use of the appellant's inventions, by the United States, at a fair and reasonable rate of compensation. This opinion would seem to be hopelessly at variance, not only with the statute law of the United States, as it has stood since 1870, but also with the doctrine established by the supreme court long before assignments, made prior to the filing of applications for letters patent, were expressly authorized by statute.

The rights with which inventors are invested by law, before their inventions are patented, are defined by Mr. Robinson as follows:

> The property of an inventor in his patented invention is divisible into (1) The invention, or the right to make, use, and sell the new art or instrument; and (2) The monopoly, or the right to exclude others from such making, use, or sale. The former exists from the moment the inventive act is completed, and may be enjoyed or disposed of by him as he pleases. Before his inventive act is finished no property in the invention can exist, but the proposed inventor may make contracts concerning it which will operate upon it when completed, and create rights in it which can be then enforced. The latter property exists only after the patent creating the monopoly is granted, and until then cannot be enjoyed by the inventor or, in any proper sense, assigned to others. But, as in the case of the invention, he may bind it by contracts which become operative when the patent issues, and which derive their force partly from the doctrines of the common law and partly from the provisions of the statutes relating to the ownership of patents. 1 Rob. Pat. 579.

A completed invention may be the subject of an assignment, grant or license, although not patented. Gayler *v.* Wilder, 10 How. 477; Troy Co. *v.* Corning, 14 How. 193; Cammeyer *v.* Newton, 94 U. S. 225, 226; Hammond *v.* Organ Co., 92 U. S. 724; Stamping Co. *v.* Jewett, 7 Fed. Rep. 869; Windmill Co. *v.* Windmill Co., 8 Blatch. 295; Rathbone *v.* Orr, 5 McLean 131; Herbert *v.* Adams, 4 Mason 15; Newell *v.* West, 13 Blatch. 114; Gay *v.* Cornell, 1 Blatch. 506; Nesmith *v.* Calvert, 2 Robb. 311.

The character of the license-contract between the em-

ployé and his employer is determined by the legal qualities of the property to which the contract relates. If this property is a mere product of mechanical skill, constructed by the employé, out of working hours, with his own materials and labor, the only compensation to which he is entitled is compensation for the skill, labor and materials employed in its construction.

But if the property created by the employé is an invention, made out of working hours, without the help of other employés and without the use of the employer's money, or materials, or other property, the employé is entitled to compensation for the exercise of his inventive genius in the creation of the property. For the use of property so created the constitution and laws have secured special compensation. They have provided in effect that the inventor shall be entitled, from the date of his letters patent, to royalties, for the use of his invention. The cost of a machine embodying the invention may be very small compared with the annual royalty to which the inventor will be entitled for its use.

If the property created by the appellant had been, for example, an office desk, involving no invention, constructed out of working hours, with his own labor and materials, the implied agreement of the United States, upon its acceptance and use at the Frankford arsenal, would only have been to make reasonable compensation for the labor, skill and materials used in the construction of the desk. But that which was in fact created by the appellant, out of working hours, without the use of any labor, money, or materials of the United States, was a group of inventions; and the adoption and use of those inventions, by the United States, raised an implied promise to pay, from the date of the letters patent, reasonable royalties for their use.

These royalties are payable, not from the inception of the implied contract, but from the date of the letters patent, because, until the letters patent are granted, there is no authoritative determination that the device *is* an *invention*, or that the employé is the *first inventor*. Until there is a patent there can be no royalties.

The statute carefully and accurately distinguishes between patentable articles purchased from the inventor, or used with his consent, prior to application for letters patent, and those so purchased or used after such application. The following is the provision of the statute:

SEC. 4899. Every person who purchases of the inventor, or discoverer, or, with his knowledge and consent, constructs any newly invented or discovered machine, or other patentable article, prior to the application of the inventor or discoverer for a patent, or who sells or uses one so constructed, shall have the right to use, and vend to others to be used, the *specific thing* so made or purchased, without liability therefor.

This statute exempts those who *purchase* the patentable article *from the inventor*, or construct it *with his consent*, prior to the application for letters patent, from liability after the patent is granted, for the use of the *specific thing* so purchased or made; but it does not exempt from such liability those who use the thing, prior to the application for letters patent, *without the consent* of the inventor.

The court of claims relied upon section 4899 of the revised statues as a warrant for the position that, before filing an application for letters patent, the inventor possesses no property in his invention which can become the subject of an implied contract. The court understood the statute to declare that, until the inventor obtains or applies for letters patent, his invention "is not property, and *anyone who may possess it may use it, and as to the specific thing so used, the law will not consider him a wrong-doer, or hold him liable though he continue the user after a patent be granted.*" The court wholly dispenses with the *consent* of the inventor. But so does not the

statute. The statute makes the consent of the inventor to the construction of the machine essential to exemption from liability *for its use after the patent is granted.* The inventor is enabled, by selling a machine, or consenting to its construction, before his application for letters patent is filed, to license the vendee or constructor to use the invention, embodied in the machine, after the patent is granted. This statute makes a license so granted precisely as effective as a license granted after the issue of letters patent. But only those who, before the application for letters patent, either purchase the patentable article from the inventor, or construct it with his knowledge and consent, are exempt from liability for its use, after the patent is granted. All others who use the article before the application is filed are just as powerless to use it after the patent is granted, as if they had not used it before the application was filed.

The effect of section 4899 is, therefore, to recognize in the inventor the same power to dispose of his invention, by contract, before the grant of letters patent, as after the grant. In other words, this statutory provision expressly recognizes the existence of property in an invention, capable of being the subject of an implied contract, before as well as after the grant of letters patent. Not only does section 4899 of the revised statutes expressly recognize an invention as such property, but by the act of July 8, 1870, Congress authorized the assignment of an invention before application filed, and enacted that, in case of the death of the inventor, before application filed, the invention should pass to his executor or administrator. The following is the language of the statute:

Sec. 4895. *Patents may be granted and issued, or reissued, to the assignee of the inventor* or discoverer, but the assignment must first be entered of record in the patent office. And in all cases of an *application, by an assignee*, for the issue of a patent, the application shall be made and the specification sworn to by the inventor, or discoverer.

Sec. 4896. When any person, having made any new invention or discovery, for which a patent might have been granted, dies before a patent is granted, *the right of applying for and obtaining the patent* shall devolve on his executor, or administrator, in trust for the heirs at law of the deceased, in case he shall have died intestate, or if he shall have left a will, disposing of the same, then in trust for his devisee, in as full manner and on the same terms and conditions as the same might have been claimed or enjoyed by him in his lifetime.

These statutory provisions would, of course, make inventions property before the grant of letters patent or the filing of applications therefor, even if inventions in that condition had not been property before.

When the case of Gayler *v.* Wilder, 10 How. 477, was decided, (in 1850) no statute authorized the assignment of an invention before application for letters patent, or the devolution of an invention upon an executor or administrator, in case of the death of an inventor before application filed. In that case an assignment of an invention was made *before* the *application* was *filed*. The court decided as follows:

The inventor of a new and useful improvement has certainly no exclusive right to it until he obtains a patent. The right is created by the patent, and no suit can be maintained by the inventor against any one for using it, before the patent is issued. But the discoverer of a new and useful improvement is vested by law with an inchoate right to its exclusive use, which he may perfect and make absolute, by proceeding in the manner which the law requires. Fitzgerald possessed this inchoate right at the time of the assignment. The discovery had been made and the specification prepared to obtain a patent. And it appears, by the language of the assignment, that it was intended to operate upon the perfect legal title, which Fitzgerald then had a lawful right to obtain, as well as upon the imperfect and inchoate interest which he actually possessed. The assignment requests that the patent may be issued to the assignee. And there would seem to be no sound reason for defeating the intention of the parties, by restraining the assignment to the latter interest and compelling them to execute another transfer, unless the act of Congress makes it necessary. The court think it does not. The act of 1836 declares that every patent shall be assignable in law and that the assignment must be in writing and recorded within the time specified. But the thing to be assigned is not the mere parchment on which the grant is written. It is the monopoly which the grant confers; the right of property which it creates; and, when the party has acquired an inchoate right to it, and the power to make that right perfect and absolute, at his pleasure, the assignment of the whole interest, whether executed before or after the patent issues, is equally within the provisions of the act of Congress.

In Littlefield *v.* Perry, 21 Wall. 205, the court said:

> It is well settled that a recorded assignment of a perfected invention, made before a patent was issued, carries with it the patent when issued. * * * An assignment of an imperfect invention, with all improvements upon it that the inventor may make, is equivalent, in equity, to an assignment of the perfected results.

In Cammeyer *v.* Newton, 94 U. S. 225, the supreme court reaffirmed the doctrine that inventions may be assigned before they are patented. In Hendrie *v.* Sayles, 98 U. S. 540, the supreme court held that an assignment of an invention may be made before the patent is obtained, and the patent, when granted, is vested as a legal estate, in the assignee. In Bowman *v.* Reed, 2 Wall. 591, the supreme court held that the effect of an assignment of an invention and all subsequent improvements thereon, executed pending an application for letters patent, "was to transfer the whole title to the several improvements to the assignee."

In Hammond *v.* Mason Organ Co., 92 U. S. 724, the appellant's application for letters patent was dated Sept. 25, 1868. On the same day he entered into three contracts with the defendants. By the first he sold the invention covered by the application to the defendants. By the second he licensed them to use this invention, in connection with his former patents, for a stipulated royalty. The third contract provided that if they failed to secure a patent for the invention sold to them by the first contract, they should have the exclusive right, under patents already granted, to make, use and sell the specific mechanism described in the application.

Mr. Justice Miller, delivering the opinion of the court, said:

> Without elaborating this matter, we concur in the opinion of the circuit court, that Louis, having *sold* this *invention*, and doubt existing whether the purchasers would obtain a patent for it, intended by this contract and by exhibit D to secure to them the benefit of the exclusive *use* of that invention, in connection with his first mechanism, so long as the latter was protected by any patent founded on his right as inventor. It was this use for which defendants are sued in this case.

While it is, perhaps, not necessary to decide whether in any case a sale of an invention which is never patented carries with it anything of value, we are of the opinion that the rights growing out of an *invention* may be sold, and that in the present case the sale, with the right to use it in connection with the existing patent and its reissues or renewals, protects defendants from liability as infringers.

In Troy Factory *v.* Corning, 14 How. 193, 209, Burden had in 1836 covenanted to convey to the appellant an invention not then completed. The invention was patented in 1840, but the conveyance was not executed until 1848. The supreme court held that the covenant of 1836 was effective to convey the patent when granted.

In Hartshorn *v.* Day, 19 How. 211, Chaffee had applied for a renewal of his patent on the 22d of May, 1850, under the statute then in force. On the next day he agreed to convey to Goodyear his renewed patent, in consideration of the sum of three thousand dollars. This agreement was subsequently modified by an arrangement between Chaffee and Judson, in which Goodyear acquiesced. Mr. Justice Nelson, delivering the opinion of the court, said:

By this first agreement, Chaffee bound himself to assign to Goodyear the renewed patent, as soon as it was obtained, for the consideration of $3,000. Goodyear became thus equitably entitled to the entire interest in the patent during the extended term, and could have invested himself with the legal title on the payment, or offer to pay the three thousand dollars, had he not subsequently acquiesced in the modification of it with Judson.

In Railroad Co. *v.* Trimble, 10 Wall. 367, 379, the court said:

The language employed is very broad. It includes alike the patents which *had been* issued and all which might be issued thereafter. No discrimination is made between those for the original invention and those for alterations and improvements, nor between those which were first issues and those which were reissues or renewals and extensions. The entire inventions and all alterations and improvements, and all patents relating thereto, whensoever issued, to the extent of the territory specified, are within the scope of the terms employed. No other construction will satisfy them. Upon the fullest consideration we have no doubt such was the meaning and intent of the parties.

The effect, of such a contract, we think, has been settled by this court in *Gayler* v. *Wilder and others*. Fitzgerald, the inventor, before the patent was issued, assigned his entire right to Enos Wilder. * * *

The defendants insisted that Enos Wilder had not the legal, but only an equitable title. Upon the question whether an assignment subsequent to the issuing of the patent was necessary to pass the former to the assignee, this court said: "We do not think the act of Congress requires it, but that when the patent issued to Fitzgerald, the legal right to the monopoly and the property it created was, by the operation of the assignment then on record, vested in Wilder. * * * The act of 1836 declares that every patent shall be assignable in law. The thing to be assigned is not the mere parchment on which the grant is written, but the monopoly which the grant confers—the right of property which it creates. And when the party has acquired an inchoate right to it, and the power to make that right perfect and absolute at his pleasure, the assignment of his whole interest, whether executed before or after the patent issued, is equally within the provisions of the act of Congress." We concur in these views. The rule laid down is the law of this tribunal upon the subject.

In Bunker *v.* Stevens, 36 Fed. Rep. 245, a licensee agreed to convey to the patentees any improvements, on their invention, which he might make during the period covered by the license. Judge Nixon held this to be a valid agreement.

In Solomons *v.* United States, the supreme court not only recognized the validity of assignments of unpatented inventions, but actually made the validity of such assignments one of the main grounds of the judgment in that case. The court held that the inventor was not the owner of his invention, as against the United States, because he had sold it, in advance, to the United States. As already stated the court said:

If one is employed to devise or perfect an instrument or a means, for accomplishing a prescribed result, he cannot, after successfully accomplishing the work for which he was employed, plead title thereto, as against his employer. That which he has been employed and paid to accomplish becomes, when accomplished, the property of his employer. Whatever rights, as an individual, he may have had to his inventive powers and that which they are able to accomplish, he has *sold*, *in advance*, to his employer.

VII.

The court of claims said (Rec., p. 14):

If the transaction was one of contract *ab initio*, what was it that the inventor undertook to sell and the manufacturer to buy? If it was simply the thing as it stood, an unpatented, untried invention, without

reference to a patent being taken out by either party, the mere disclosure of a secret, the damages must needs be simply for the disclosure of the secret, and in such a case as this exceedingly small.

The meaning of the court of claims evidently is that the appellant merely "disclosed" to the government a "secret" and licensed the government to use it. But in this the court of claims not only ignores the fact that the thing disclosed, instead of being a mere *secret*, was an *invention* made patentable by the constitution and laws, but also ignores two well-known principles of the patent law. The first is that the right of the inventor to obtain letters patent, for his invention, is not controlled, before public use, by any statute of limitations as to time, and, before public use, cannot be taken from him against his will,—can only be lost by contract express or implied. The second principle is that for two years, after his invention is actually in public use, the inventor has a right, secured by positive law, to apply for and take out letters patent.

When the transaction occurred, which, as the court holds, fixed the relations of the parties, the defendants were bound to know that their own constitution and laws secured to the appellant the right to apply for letters patent, not only before, but for two years after, public use. These rules of law entered into the implied contract of the parties.

It is not true, then, that all the appellant did was to "disclose a secret" and authorize the government to use it. What he, in fact, offered to the government was perfect and completed inventions, which the constitution and laws gave him the right to patent, not only for an unlimited time before, but for two years after public use. The defendants were bound to know that when letters patent should be granted, the appellant's right to compensation for the use of his inventions in machines thereafter constructed would attach, and that such right could only be lost by contract express or implied.

VIII.

The following paragraph in the reasoning of the court of claims (Rec., p. 13) embraces seven substantive statements, *every one of which is shown by the record itself to be erroneous :*

> The claimant gave nothing, contributed nothing, assumed nothing. And, according to his theory of the transaction, he was to give nothing, was to contribute nothing, was to assume nothing. The agreement, which he would have the law make for both parties, was to be entirely unilateral ; the defendants were to expend money in building a machine which should test the invention ; the claimant was to continue free to bring that state of affairs to an end at any moment by the single expedient of filing his application for a patent when he would be able to stop the completion of the machine they were building, and impose his own terms for the right to use his invention.

The record shows that it is a mistake to assert that, in this transaction, the appellant gave nothing, assumed nothing. He gave the use of "perfect and completed" inventions, which *saved many millions of dollars to the treasury of the United States.* Nor is it accurate to say that, according to the appellant's theory of the transaction, he was to give nothing, to contribute nothing, to assume nothing. The claimant's theory was that he was to contribute precisely what he did contribute,—the use of his immensely valuable inventions. Nor was the implied contract, on which he based his demand, a unilateral contract. It was a mutual contract. The appellant impliedly agreed to permit the government to use his inventions, and the government impliedly agreed to pay a fair and reasonable compensation for their use.

It is a mistake to say that the government was to expend money in the construction of a machine to *test* the invention. This is not true even as to the complicated loading machine. The government did not undertake to *test*, nor did it ever *test*, even the loading machine. It *constructed* the loading machine, not for the purpose of

testing it, but for the purpose of *using* it. It needed no test. It was a perfect and completed invention. But this statement is *signally erroneous as to the little anvil*, which was not a machine, but was a mere product.

Nor was the appellant to remain free to bring the arrangement to an end, at any time, by taking out letters patent. The appellant never either expressed or entertained the opinion that, by taking out letters patent, he could terminate his implied contract with the United States. Nor was it ever any part of his theory that, by taking out letters patent, he could impose his own terms for the use of his inventions. It was, always has been, and now is his opinion that he gave the government an irrevocable license to use his inventions, not gratuitously but for a just and reasonable compensation, and that, in the absence of an arrangement between the parties fixing the rate of compensation, it would be fixed by the proper judicial or legislative tribunal of the United States.

The court of claims asks this question:

> If the subject of bargain and sale was the invention considered as a patentable device, what reason is there for supposing that it was within the mutual intent of the parties that the seller should be at liberty to take out a patent and exclude the buyer from the use of the invention, any more than that the buyer should take out the patent and exclude the seller from all rights in the device?

Certainly there was no more reason for one of these suppositions than for the other. There was not the slightest ground for either.

IX.

In the opinion (Rec., p. 12) the court of claims intimates that the appellant took "advantage of his connection with the government to introduce his unpatented device into the public service." If all the court meant was that the appellant would not have made these inventions, if he had

not been employed in an arsenal, the statement would seem to be immaterial; for, as the supreme court said, in Solomons' case, "an employé, performing all the duties assigned to him in his department of service, may exercise his inventive faculties in any direction he chooses, with the assurance that whatever invention he may thus conceive and perfect is his individual property. There is no difference between the government and any other employer in this respect."

But if the meaning of the court was, what it seems to have been, that the appellant took advantage of his employment to *foist his inventions upon the government*, the bane and the antidote "are close together." For the second finding contains the following clause (Rec., p. 5), which has already been cited for another purpose.

> In 1867 the claimant, being a machinist or skilled mechanic, in the Frankford Arsenal, and getting as compensation $4 a day, came to General Benét, the commanding officer, and suggested that an improvement could be made in the method of loading cartridges, and exhibited to the commanding officer then or subsequently his device for an improvement, which is now embodied in patent No. 97,904. General Benét, *after due examination and consideration*, authorized the construction of such a machine. The machine was built, at a cost of $500, by the United States, *according to the design of the claimant*. On its completion, it proved to be *thoroughly satisfactory to the commanding officer*, who authorized the construction of a second machine.

The third finding contains the following statement (Rec., p. 5.):

> The thought and time which he devoted to it, were voluntarily given, *as a good and earnest servant* of the government, intent on rendering more effective the work and machinery of the arsenal.

The fifth finding contains the following statement (Rec., p. 6):

> This increase of pay and advancement of position came through and by authority of the commanding officers of the arsenal, and the consideration or reason therefor was that the claimant was *a faithful, intelligent and capable employé*, whose services were of great value to the government. It was never stipulated by any commanding officer, nor understood or agreed to by the claimant, that the advance of wages was to be a consideration for the use of his inventions; though the practical

ability of the claimant as an inventor and the value of his inventions to the government did operate upon the minds of the officers in estimating the claimant's services and ordering his advancement.

In the opinion (Rec., p. 11) the court said:

Here the inventor was not the chief of the bureau in which the device was to be used; he had not been assigned to the duty of selecting a device; he did not withhold from the other officials, responsible for the selection, the fact that he was the inventor and that the adoption of his device might involve the government in legal liability. On the contrary the claimant was a simple mechanic, on daily wages, holding a subordinate position, charged with no responsibility save that of performing honestly his daily task, *and his conduct was fair, honest and irreproachable.*

How then can it be justly said that the appellant took advantage of his employment to foist his inventions upon the government?

X.

Referring to the implied contract, on which the appellant relies, the court of claims said (Rec., p. 14):

It seems manifest to the court that this would be a contract which the law ought not to imply, and that it would be the result of confusing the law of contract with the law of tort. The court cannot look to the law of contract, when dealing with the question of jurisdiction, and to the law of tort when dealing with the measure of damages.

But it is respectfully submitted that the appellant, has not confounded the law of tort with the law of contract, in this case.

The measure of damages, in the case at bar, is the fair and reasonable value of the use of the appellant's inventions. This and this only was claimed by the appellant, in the petition, and in the argument. The appellant, in his brief, said:

The rule for estimating the compensation, in this action, is that which obtains in an ordinary action, on an implied contract, for the hire or sale of personal property, in which the compensation is not fixed by the parties. The rule observed in the action at law for the infringement of a patent, so far as it differs from the rule for estimating the compensation in case of the sale or hire of personal property, has no applicability to this case. Whatever punitive elements may, or may not, be admitted by the courts of law, in estimating the damages for the infringement of

patents, nothing of that kind is admissible in this case, which is a case, not of infringement of the patent by the United States, but of use of the patent with the consent of the patentee—a case, not of tort, but of implied contract. The law makes of the implied contract an agreement to pay and to receive, as compensation for the use of the invention, the value of its use at the time and place and under the circumstances.

The court, in the opinion (Rec., p. 14), said :

The measure of damages, in a case of implied contract, is the market value of the thing at the time.

But when a new thing, never before used or sold, is sold on an implied contract, the price not being fixed, there is no possibility of applying the court's measure of damages. The thing sold has no market value. A new machine just invented can by no possibility have a market value. It might as well be said that if a living Dodo, the survivor of a species long supposed to be extinct, were discovered in "Darkest Africa," and sold to the proprietor of a menagerie, on an implied contract, the price not being fixed, the measure of damages would be the market value of the Dodo. If the "market value" of a new thing were the measure of damages, in such a case, the vendor of a new thing, whether a Dodo or some other "discovery or invention," could recover no compensation for it whatever, although it might be clear to the judgment of every man that it was of very great value. The appellant, then, has not confounded the law of tort with the law of contract.

XI.

In the opinion (Rec., p. 13) the court said :

Now, in this case before us, the defendants, not wrongfully, but at the invitation of the claimant, with his consent and by his solicitation, took his unpatented, untried, unknown device, and by bringing it to a successful, practical result, imparted to it a value it had never had before. The defendants did this at their own cost, and assumed exclusively the risk that their outlay might be thrown away, and the experiment end in failure.

The errors in this statement are very grave. The ap-

pellant did not "solicit" the adoption of his inventions. The whole fact is stated, in the first finding, in the following words (Rec., p. 4):

> In 1867, the claimant * * suggested that an improvement could be made in the method of loading cartridges, and exhibited to the commanding officer then or subsequently his device for an improvement, which is now embodied in patent No. 97,904.

The findings of fact do not show that the government brought the appellant's device to a successful practical result. They show exactly the contrary. The inventor, not the government, made the inventions so perfect that the very first machines constructed were perfectly successful, and have been in use, without alteration, ever since they were built. The government never imparted to either of the inventions any part of its value. Nor did the government ever make any experiments with either of the inventions. There was no occasion or room for experiment.

HALBERT E. PAINE,
Counsel for Claimant.

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IN THE

Supreme Court of the United States.

OCTOBER TERM, 1895.

JABEZ H. GILL,
APPELLANT,
v.
THE UNITED STATES.

No. 85.

APPEAL FROM THE COURT OF CLAIMS.

Supplemental Brief for Appellant.

HALBERT E. PAINE,
Counsel for Appellant.

WASHINGTON, D. C.:
GIBSON BROS., PRINTERS AND BOOKBINDERS.
1895.

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THE UNITED STATES.

No. 85.

Appeal from the Court of Claims.

Supplemental Brief for Appellant.

I.

The counsel for the United States asserts that from 1867 until 1884 the claimant made no demand for compensation for the use of his inventions, and that this silence of seventeen years involved laches fatal to his case. On what does the counsel base this assertion? He bases it on the circumstance that the findings of fact are silent on this subject. But with what propriety could the court of claims have embraced a statement on this subject in the findings of fact? Is the defence of laches, in this case, now within the cognizance of the supreme

court? Has that defence any connection with the single question now before this court?

If the case goes back to the court of claims, the defence of laches will then be in order. And then the counsel will learn that, soon after the construction of the first loading machine, Gen. Benét was made chief of ordnance and came to Washington. He will learn that Gen. Benét, in his deposition in this case, has testified that soon thereafter he went, on behalf of the appellant, before a committee of congress and stated that, in his judgment, the appellant was entitled to $50,000.00 for the use of his inventions, including only a part of those now in controversy, the others having been made after Gen. Benét left the arsenal. He will learn that the appellant, after encountering the "slings and arrows of outrageous fortune," in congress, for many years, finally resorted, in 1884, to the court of claims. And he will also have occasion to observe that, after six years of persistent delay, on the part of the government, in the court of claims, and four years of hibernation, on the calendar of the supreme court, the case, if decided by this court in favor of the appellant, will still be in a preliminary stage, with many years of delay in prospect.

II.

Another proposition of the counsel is stated on page 25 of his brief, in the following words:

All other questions out of the way, no implied contract can be set up in this case, for the reason that no officer who did or who assented to any of the things that were done was authorized to bind the United States in the premises.

Italics were used to give emphasis to this proposition. But this objection does not touch the outermost circumstance of the question now before this court. The only

question now before the court is whether the relation, which the appellant sustained to the government, when he made these inventions, as an employé in the Frankford arsenal, excludes his right to compensation for their use. The findings of fact do not set forth Gen. Benét's authority. This is certainly true. But it is also absolutely immaterial. The findings of fact ought not to set forth his authority. There was no occasion for the statement of any facts in the findings except those which bear upon and present the question whether the appellant's employment, at the arsenal, deprived him of his right to compensation for the use of his inventions. Upon that question the facts, relating to Gen. Benét's authority, have no bearing at all; and on this hearing the question of his authority is not within the cognizance of the court.

If the case goes back to the court of claims, this question may be in order there; and the counsel will then learn that neither Gen. Benét, nor any subsequent commandant of Frankford arsenal, ever constructed one of the machines in controversy, or any other machine, without due authority from the war department.

But suppose this question to have been within the cognizance of the supreme court on this appeal. What, then, would have been the presumption of law as to General Benét's authority? The second finding of the court of claims shows, near the head of page 5, that the United States, not Gen. Benét, *constructed* the machines. The same finding shows, near the middle of page 5, that the United States, not Gen. Benét, *used* the machines. The court does not find either that Gen. Benét was, or that he was not, authorized to construct the machines. On this point the court is absolutely silent. Now the law peremptorily forbids the construction of a single machine at the Frankford arsenal, without authority from the war

department. Would the presumption, then, be that this law was trampled on by the successive commandants of Frankford arsenal? Certainly not. The presumption would be that the law was obeyed. And, if the case goes back to the court of claims, where the question of the authority of these commandants will be a legitimate question, the counsel will learn that not one of the machines was constructed without due authority from the war department.

III.

On page 19 of his brief the counsel says:

> If there were an implied contract, it was to pay the value of the unpatented inventions and not a royalty for the use under patents.

The answer to this proposition is threefold.

(1) In the first place, the question now before the supreme court is not whether the implied contract, if one exists, is for a sale or for a license, but whether the appellant, in view of his relation to the government, as an employé in the Frankford arsenal, can maintain any action at all respecting these inventions. The latter question only is now before the court.

(2.) If the former question were now before the court, the counsel's proposition would be negatived by the decision of the supreme court in Solomons' case, whether the appellant did, or did not, use the property of the government and the services of other employés, in the development of the inventions,—that is to say, whether the counsel's theory of the case, or my own, is correct. On his theory, this proposition would be negatived by Solomons' case because, in that case, the court held that where the employé used the property of the government and the services of other employés, to develop his invention, the case became one, not of sale, but of irrevocable

license, *without compensation*. And the principle of that decision, applied to my theory of the case, necessarily makes the case, not one of sale, but one of irrevocable license, *with compensation*.

Now, the counsel refers to the reservations, in the appellant's assignments of his patented inventions to the respective cartridge companies, as presumptive evidence that he expected no compensation for the use of his inventions. These assignments raise no such presumption. They do show that the appellant, having given to the United States irrevocable, but unrecorded, licenses to use his inventions, was careful in good faith to secure to the United States the enjoyment of those licenses, by reservations in his several assignments. But they also show something more. They show that the appellant's transaction, with the United States, was a license, and not a sale.

(3.) Suppose it to be true that the implied contract, if it exists, must be for a sale, and not for a license. Until a final judgment, on the merits, is rendered in the court of claims, the petition is open to amendment.

IV.

The counsel has said that the appellant was the superintendent of the arsenal, and has insisted that he was, for that reason, a trustee, and could not lawfully reap any benefit from these inventions. The court of claims, on page 11 of the record, disposes of these assertions as follows:

> In Solomons' case the question was much plainer and the defence much stronger than they are in this. Here the inventor was not the chief of the bureau in which the device was to be used; he had not been assigned to the duty of selecting a device; he did not withold from the other officials, responsible for the selection, the fact that he was the inventor and that the adoption of his device might involve the government

in legal liability. On the contrary the claimant was a simple mechanic, on daily wages, holding a subordinate position, charged with no responsibility save that of performing honestly his daily task, *and his conduct was fair, honest and irreproachable.* Therefore the relation of guardian and ward, or of trustee and *cestui que trust*, as between himself and the government, can hardly be said to exist.

V.

The counsel thinks that the effect of section 4899 of the revised statutes is to provide that every person, who purchases a machine from the inventor, before an application for letters patent is filed, shall be exempt from liability *ex contractu*, as well as *ex delicto*, for using the machine after the patent is granted. That is to say, if A purchases a machine, from the inventor B, before the application for letters patent is filed, the consideration for the purchase being A's promise to pay (say) ten dollars, each month, for the use of the invention embodied in the machine, then A, although bound by that promise until the patent is granted, will be exempted, by the statute, from liability on the promise after the patent is granted. But such a nullification of the contract cannot be the effect of the statute. The effect must be merely to provide that, in such a case, the purchaser shall be exempt, after the patent is granted, as he was before, from liability *ex delicto*, as an infringer, for statutory damages,—that is to say, for his own profits, or for the inventor's losses, or for punitive damages. This law nullifies no contract. It leaves the contract standing, after patent granted, exactly where it stood before. It does provide that, after the patent is granted, the purchaser shall not be held to be a tort-feasor, but it does not provide that he shall not be held to be a bound promissor. It is a law of tort, and not a law of contract.

VI.

On pages 13 and 14 of his brief the counsel says:

> The word "develop," among other meanings, has the following:
> To free from a cover or envelope; to disclose or make known. Its synonyms are: to uncover; unfold; lay open; disclose; exhibit. (Webster.)
> To unfold; unwrap; set forth; disclose; to bring or work out in full. (Century Dictionary.)
> To unfold; to exhibit; to make known. (Worcester.)
> To disclose; to further; to promote. (The Encyclopædic Dictionary.)
> To unfold something invisible; to work out in detail. (Standard Dictionary.)
> To disengage from something that enfolds and conceals; to clear from its covering. (Johnson.)

The counsel only gives a part of Webster's definition. The entire definition is this:

> 1. To free from a cover or envelope; to disclose or make known; to unfold gradually, as a flower from a bud; hence to bring through a succession of states or stages, each of which is preparatory to the next; to lay open by degrees; to unravel; as to *develop* a plot.

Of these several definitions the counsel rejects the following, viz: "*to unfold;*" "*to bring or work out in full;*" "*to further;*" "*to promote;*" "*to work out in detail;*" and "*to bring through a succession of states or stages, each of which is preparatory to the next.*" All that remain, then, for his use are the following: "*to disclose or make known;*" "*to uncover;*" "*to lay open;*" "*to exhibit;*" "*to unwrap;*" and "*to set forth.*"

In his judgment, therefore, if he adopts either of these latter definitions, to develop a perfect and complete invention must be either to disclose, make known, lay open, exhibit, unwrap, or set forth that invention. But the appellant's drawings did all of this, and did it perfectly and exhaustively, before any machines were constructed. But then the fact is that the counsel does not use either of these definitions himself. According to his own definition, to develop a perfect and complete invention is to test the invention by a constructed machine. How he

would proceed, under that definition, to develop the invention of an art, or method, is not apparent. On this theory, to test a faultless opera, painting, statue, poem, marine engine, railway locomotive, is to develop the invention involved in each.

But then it is not necessary for the counsel to coin a definition for the occasion. Nor are we driven to the extremity of a resort to a French dictionary, or any other dictionary, for the purpose of ascertaining what the supreme court, in Solomons' case, meant by the expression "to develop the invention." There is a better way to ascertain the meaning of the court.

If any mystery surrounds the meaning of these words as used by the supreme court, in Solomons' case, the decision itself furnishes the key to unlock that mystery. By the "development of the invention" the court of course meant the performance of such acts as constituted what the court characterized as the development of the invention, in Solomons' case, and in the case of McClurg *v.* Kingsland. What were those acts in Solomons' case? They are set forth near the end of the opinion, in the following words:

> Clark was in the employ of the government when he made this invention. His experiments were wholly at the expense of the government. He was consulted as to the proper stamp to be used, and it was adopted on his recommendation. He notified the government that he would make no charge, if it adopted his recommendation and used his stamp; and for the express reason that he was in the government employ, and had used the government machinery in perfecting his stamp. He never pretended personally to make any charge against the government. Indeed there is but one difference between that case and this: In that Harley's wages were increased, on account of his invention; in this Clark's were not, but such difference does not seem vital.

In McClurg *v.* Kingsland, the invention was not a machine but was only an intangible art, or method. The inventor, being an employé, made a series of experiments, using the building, furnace, machinery, tools, iron, and

moulds of his employers, and the services of other employés. He made these experiments in time for which he was paid by his employers. His experiments were failures, at first; but he finally succeeded. He used the property of his employers and the services of other employés, not in the construction of a machine, or in the manufacture of a product, but in the development of the art, or method,—the invention itself.

Now, in neither of these two cases did the acts, which constituted the so-called "development of the invention," consist of the construction of a machine embodying a complete and perfect invention. In both cases the development consisted in perfecting the invention itself. Whatever different meanings the lexicographers, foreign or domestic, may attach to the word "development," we learn from the supreme court itself what the court meant by the term "development" in Solomons' case. The court did not mean the embodiment of a perfected invention in material form. Indeed, in McClurg *v.* Kingsland, such embodiment was impossible, for the thing invented was only an art, or method, and was, therefore, incapable of material construction. This very case, therefore, from which the claimant draws his rule, is one to which the rule does not and cannot apply. By the development of the invention the court meant the perfecting of the invention itself.

The loading machine, embodying the appellant's perfect and completed invention, was not more the means of developing that invention than was the printed Iliad, or Odyssey, or Hamlet, or Inferno, the means of developing either of those poems; than were the "singers and players on instruments," who performed Beethoven's masterpiece, the means of developing that creation of genius; than were Daniel Webster's garments the means of developing his intellect and belittling the work of his "creator and bountiful benefactor."

The counsel for the government insists, as I have said, that, in the sense of the decision in Solomons' case, to develop an invention is to put the invention in material form. This theory leads to manifest absurdities. It is a well known fact that, in the cases of nine out of every ten machine-inventions heretofore patented in the United States, no working machines have ever been constructed until after the patents were granted. If, in one of these nine cases, A, the inventor, being an employé of B in the line of work to which the invention pertains, licenses B to use the invention, without any express stipulation as to the compensation to be paid for its use, and B constructs a machine exactly in conformity with the drawings and specification, the invention shown in the drawing and specification being perfect and complete, and the machine being in fact the first ever constructed, then, on this theory, B cannot be liable, on an implied contract, for the use of the invention, but will enjoy an irrevocable gratuitous license because he has used his own materials and labor in the construction of the machine, and has thereby developed the invention. Certainly the supreme court cannot have used the expression "to develop the invention" in such an absurd sense.

The counsel says that the word *practical* is a synonym of the word *practicable*. It is certainly true that, in common parlance, these two words are sometimes carelessly interchanged. But Webster does not make these words synonyms of each other. He makes only *possible* and *feasible* synonyms of *practicable*. All his definitions of the word *practical* differ from his definition of the word *practicable*. Not one of them is common to both words. His definitions of *practicable* are:

1. Capable of being practiced, or performed; capable of being done, or accomplished; possible to be accomplished with known means and

resources; feasible; as a practicable plan. 2. Admitting of use, or of being passed, or traveled; passable. When the roads began to become *practicable*.

But his definitions of *practical* are:

1. Pertaining to practice. 2. Capable of being turned to use or account; useful, in distinction from *ideal* or *theoretical*. 3. Evincing practice or skill; ready to apply knowledge to some useful end; as a *practical* man.
4. Derived from practice; as practical skill.

Although these two words are sometimes confounded, in common parlance, they are never confounded in mechanics. In mechanics to put a machine-invention in *practical* form is to put it in *material* form,—that is to say to construct the machine, in accordance with the drawing and description. If the invention is, in the drawing and description, inoperative, imperfect, incomplete, it will be none the less in *practical* form, if constructed in accordance with the drawing and description. But it will not be a *practicable* invention. The invention will have been put in *practical* shape, but not in *practicable shape*. To put the invention in *practicable* shape is not merely to translate it, from the drawing and description, into material construction, but is to make the invention complete and perfect and operative. Every machine-invention hitherto patented in the United States may be put into *practical* shape, without any additional exercise of inventive skill. But not half of the inventions hitherto patented can be put into *practicable* shape, without the exercise of inventive skill.

As evidence that the words *practicable* and *practical* are synonymous, the counsel suggests that they have a common derivation. But how does that fact show that they are synonyms? The words *practicable*, *practical*, *practice*, *practitioner*, all have the same derivation; but all have different meanings. This is true of the words

fact, faction, factious, factitious, factory, factor, factorage, factive; of the words *cóntract, contráct, contracted, contractor, contractile, contractible;* of the words *machine, machinator, machinist, machination;* of the words *construct, construe, constructive, construction, constructor;* and of hundreds of other words in our language.

It is, of course, possible that these two words have been classed as synonyms by some one of these recent manufacturers of dictionaries, who measure the merits of those works, not by accuracy, but by avoirdupois, whose prefaces are swollen with boasts of multitudinous additions to our stock of words, which boasts they attempt to make good by stuffing their books with an accumulation of vile trash dug out of the slovenly every-day talk of careless, ignorant, men, women and children, to the lamentable degradation and corruption of our mother-tongue. But no accurate speaker, or writer, of English will ever be able to make these two words synonyms of each other. In Solomons' case the court did not fail accurately to discriminate between these words. The word *practicable* was used, and the word *practical* was not used, because the former did and the latter did not express the meaning of the court.

On page 9 of his brief the counsel quotes from the findings of facts as follows:

> The claimant did not use any property of the defendants or the services of any employee of the defendants in making or developing or perfecting the inventions themselves.

The counsel then says:

> The court is the best interpreter of what it meant by its own finding of facts, and we find in its opinion as follows:

Now inasmuch as this particular finding was made ten months after the opinion was delivered, this so-called "interpretation" must have been the christening of the progeny before it was known whether Benjamin or Betsey

would fit the case. The fact is that this finding was made after argument, on rehearing. The court adopted a new view of the case; and this is the reason of the inconsistency between the statements of the finding of facts and those of the opinion.

HALBERT E. PAINE,
Counsel for Claimant.

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APPEAL FROM THE COURT OF CLAIMS.

BRIEF FOR THE UNITED STATES.

STATEMENT OF THE CASE.

This is a suit for $94,693.04 in the Court of Claims by Gill to recover against the United States, on an implied contract, for the use of certain machines, the devices of which are covered by letters patent issued to claimant.

The case was submitted upon the question whether or not the claimant could maintain his action under the circumstances, even if his patents be valid and were used by defendant. (Rec., p. 3.)

The following facts, among others, were found by the court (pp. 2, 3):

1.

During the period of time within which the claimant invented the devices embodied in said patents *he was in defendant's employment*, and *was paid for his services.* He was obligated to exercise his mechanical skill, but not his inventive genius in such service. (Rec., p. 4, I.)

2.

In 1867 claimant, being a skilled mechanic in the Frankford Arsenal, suggested to the commanding officer that an improvement could be made in the method of loading cartridges, and exhibited to him his device for an improvement. The officer authorized the construction of such a machine, and it was built, at a cost of $500, by the United States, according to the design *and under the supervision of claimant.* Subsequently commanding officers ordered seven other like machines to be constructed, and this was done *under the immediate supervision of claimant.*

All eight of these machines were completed prior to the claimant filing his application for a patent.

After his patent had been issued a ninth machine was ordered and in like manner constructed *under the immediate supervision of claimant.* (Rec., p. 5.)

The other inventions for the use of which a recovery is sought—except the heading machine—were also *brought to the attention of the various commanding officers by suggestions from the claimant for making the means and appliances*

at the arsenal more efficient than they were. The heading machine was fabricated and used by the defendant *under the supervision of the claimant. The cost of preparing patterns for the iron and steel castings and of preparing working drawings and of constructing working machines* was *borne exclusively by the Government.* In each case one or more machines embodying the invention had been constructed and was in operation in the arsenal with *the claimant's knowledge and assent before he filed an application for a patent* (pp. 5, 6, II and IV).

3.

At no time did claimant bring his invention before a commanding officer or other agent of the Government as a subject of purchase and sale, nor did he ever raise an objection to the use of the invention, nor did he ever enter into any express agreement, written or oral, whereby a license was granted or intended to be granted to the Government, *nor did any commanding officer ever undertake or assume to incur an obligation on the part of the Government for the use of the invention* (p. 5, III).

4.

The claimant was, when he made his first invention *and has ever since been, in the employment of the Government,* and the fact of his practical ability as an inventor and the value of his inventions to the Government so operated upon the minds of the officers in estimating his services and ordering his advancement, that he has been promoted, from time to time, from a skilled laborer in

1867 receiving $4 per day, to the position of master armorer, with general supervision of the shops, with a compensation of $6 per day (pp. 1, 6, V).

He sold to others for various sums, aggregating $5,380, all of the patent rights for these inventions, but in all of the sales he *reserved the right to the United States to make and use said machines for its use forever* (pp. 6, 7, VI and VII).

The patents were issued as follows (Rec., p. 4):

Patent number.	Date.	Kind.
97904	Dec. 14, 1869	Cartridge-loading machine.
185858	Jan. 2, 1877	Weighing machine.
208903	Oct. 15, 1878	Gauging machine.
220472	Oct. 14, 1879	Cartridge anvil.
241962	May 24, 1881	Herding machine.
257860	May 16, 1882	Priming tool for reloading.

The Court of Claims dismissed the petition, holding that there could be no recovery under section 4899 of the Revised Statutes for the use of machines which, before patents were granted, had been constructed for defendant by petitioner, and that from the facts found there was no implied contract to pay for the use of any of the machines, saying:

> The court is of the opinion that public policy forbids that such transactions be allowed to ripen into public liabilities, and it is accordingly constrained to this conclusion that where an employee of the Government takes advantage of his connection with the Government to introduce his unpatented device into the public service, he giving no intimation at the time that he regards it as property or that he intends to protect it by letters patent, but allowing

the Government to test the invention at its own exclusive cost and risk by constructing machines and bringing it into practical use before he applies for a patent, the law will not imply a contract; neither will a contract be implied in favor of the employee who has thus placed a patentable device in the public service as to machines constructed and used after his patent has been obtained. (Rec., p. 12.)

POINTS AND ARGUMENT.

I.

When a person in the employ of another in a certain line of work devises an improved method or instrument for doing this work, and uses the property of his employer to put in practicable form his invention, and explicitly assents to the use by his employer of such invention, a court trying the facts is warranted in finding that he has so far recognized the obligations of service flowing from his employment and the benefits resulting from his use of the property, and the assistance of the coemployees, of his employer, as to have given to such employer an irrevocable license to use such invention. (*McClurg* v. *Kingsland*, 1 How., 202; *Solomons* v. *United States*, 137 U. S., 342; *Lane & Bodley Co.* v. *Locke*, 150 U. S., 193; *McAleer* v. *United States*, 150 U. S., 424; *Keyes* v. *Eureka Mining Co.*, 158 U. S., 150.)

These cases all vary in their facts from each other and from the case at bar, and emphasis was put by the court upon points in each which do not occur in the others, but the controlling principle is the same, and the facts of this case bring it within those decisions.

In *McClurg* v. *Kingsland* the suit was at law by an assignee of the patent for infringement. The inventor, Harley, was employed by defendants at their foundry, receiving wages by the week, and while so employed claimed to have invented the improvements patented.

Several unsuccessful, and finally a successful experiment was made in defendants' foundry, and at their expense. They used the improvement, and he made no demand on them for compensation. He afterwards left their employment, and gave them notice not to use it, and upon their continuing to do so suit was brought. The judge charged that these facts would justify the presumption of a license, and this court affirmed it. (1 How., 205, 206.)

It will be observed that there are differences between this case and the one at bar. Harley made several unsuccessful experiments at his employers' expense before he succeeded, while Gill thought out his plan, which was at once put into successful operation. In both cases, however, the ideas first took tangible form and were demonstrated to be practicable at the employers' expense. This variance in these cases furnishes no sound principle upon which they can be differentiated.

The claimant has all the time remained in the employ of the Government, and at advanced wages, and has himself constructed and operated these machines without ever in any way giving any notice that he was running up in his own department an enormous account against the Government. The facts of his suggesting the adoption of his improvements and using the machines in his own department, taken in connection with the reservations

(when he sold the patents to others) to the United States of the right to use those inventions, confirm the presumption that he, in return for the opportunities afforded him by the Government, had granted it a license.

The reservation was not for himself, but for the Government. He parted with all of his rights. He should not recover on what was reserved to the Government by substituting himself as the beneficiary.

In the McClurg case the patent was applied for in February, 1835, and the suit was brought in October, 1835.

In this case the main patent was issued in 1869 and the suit was not brought until 1884.

In *Solomons* v. *United States*, Clark, the inventor, was in the employment of the Government, as Chief of the Bureau of Engraving and Printing.

It does not appear that there were any experiments at Government expense. The facts stated are:

> While so employed he conceived the idea of a self-canceling stamp, and under his direction the employees of that Bureau, in the fall of 1867, using Government property, prepared a die or plate *and put into being* the conception of Mr. Clark. (137 U. S., 343.)

In this respect the case is like the one at bar. The invention was completely thought out and was at once successfully put into material form.

In the Solomon's case the invention was in 1867, the caveat in 1868, the patent in 1869, and in 1869 the defendant was notified of claimant's asserted rights.

So in that case the Government was not permitted to go on for years, using the invention in a department

managed by the claimant, who kept silent as to his rights. In Solomons' case the inventor undertook to devise the stamp and said he would make no charge to the Government therefor. (137 U. S., 344, 345.)

The court decided adversely to claimant on this aspect of the case, but also decided independently of these facts as follows:

> So also, when one is in the employ of another in a certain line of work and devises an improved method or instrument for doing that work, and uses the property of his employer and the services of other employees *to develop and put in practicable form* his invention, and explicitly assents to the use by his employer of such invention, a jury or a court trying the facts is warranted in finding that he has so far recognized the obligations of service flowing from his employment and the benefits resulting from his use of the property and the assistance of the coemployees of his employer as to have given to such employer an irrevocable license to use such invention. (137 U. S., 346.)

If such presumption were warranted in the Solomons case, where the material used was of trifling value, it would be much stronger in this case, where the material was expensive (the first machine costing $500), and the result was doubtful. This is confirmed, also, by claimant's silence of seventeen years and his express reservations for the Government.

Appellant in his brief (p. 2) says, referring to the Solomons case: "If a judgment for the appellant in the case at bar is not warranted by the opinion of the Supreme Court in that case, the judgment of the Court of Claims must be affirmed."

The argument in respect of the Solomons case is based on the foregoing paragraph from the opinion, which is set out on page 3 of appellant's brief.

The particular words looked to are "to develop and put in practicable form his invention."

It is admitted that every condition required by the paragraph is fulfilled in this case except developing and putting in practicable form. This is denied, and the denial is based upon the meaning given to these words. (Brief, p. 4.)

The finding of facts by the Court of Claims is quoted from as follows:

> The claimant did not use any property of the defendants or the services of any employee of the defendants in making or developing or perfecting the inventions themselves. (Brief, p. 5.)

Attention is called to the fact that this is limited expressly to the developing of "*the inventions themselves;*" that is to say, in making or developing or perfecting the *idea* or *plan* which he had conceived in his mind, and which constituted the invention itself, he had not used any property or the services of the employees of the defendant in experimentation. This does not mean that he did not use such for developing the perfected idea into tangible form and into practicable shape.

The court is the best interpreter of what it meant by its own finding of facts, and we find in its opinion as follows:

> In not one of the several inventions which form causes of action in this case does it appear that the claimant was indebted to the Government in the

> slightest degree *for anything appertaining to his invention* until he carried his design to the commanding officer. Up to that event the Government had aided him with neither time nor money nor material nor assistants. Up to that moment he was truly and absolutely, legally and equitably, *the master of his own device.* The Government had contributed nothing and he owed the Government nothing. If he had continued to occupy that simple position, not the shadow of a doubt could rest upon his absolute right to control *his own invention.* (Rec., p. 9.)

Again:

> From this point onward the case was somewhat like Solomon's. The Government bore the expense of *bringing the invention to the test of practical operation;* the claimant bore nothing. The Government contributed working plans, models, patterns, material, workmen, money; the claimant superintended the work of construction and was paid for his services. When the supreme moment of practical success was reached the employee had not applied for a patent nor expended a dollar in the attainment of this end. The employer had borne the entire cost *of the development, or demonstration, or experiment, or whatever it might be termed,* and paid the employee for his services upon the work, and had, with his assent, *developed the invention and made it valuable and put it at its intended work* in the shops of the arsenal. (Rec., p. 10.)

The court drew a clear distinction between the developing of the invention by experimentation as an idea and the developing of the completed invention and its translation into practicable form.

Thus it plainly appears that while the court had found that the Government had expended nothing in developing

the invention, so far as bringing it to the point of a perfect and completed concept in the inventor's mind, it had expended money in the development of the invention so far as demonstration was concerned.

There may be an apparent contradiction from the use of the word "develop" in different senses in respect of the invention, but the facts intended are distinct, and there is no foundation for the statement that the court found that there was no development by the Government. It did find explicitly that the Government bore all of the cost of putting the intangible and undemonstrated idea into concrete and working form. The question is whether that was "to develop and put in practicable form his invention," within the meaning of this language, as used in the Solomons case.

Turning to the facts in the *Solomons case* (137 U. S., 343–345), it appears that Clark "conceived the idea of a self-canceling stamp," and under his direction the employees of that Bureau, in the fall of 1867, using Government property, prepared a die or plate, and put into being this conception.

On page 345 it is further said that he expected to make no charge, "as he was employed on a salary by the Government, and had used the machinery and other property of the Government in the perfection of the stamp."

There was nothing going to show that he consumed any property of the Government, or any of the time of its employees in experimenting before he reached the point of making an invention.

He "conceived the idea of a self-canceling stamp," and this was put into practicable form with Government

property and Government operatives. There is nothing which appears to distinguish that case from this, but nevertheless the court, upon that state of facts as presented, used the language "to develop and put in practicable form his invention." This clearly meant, not that the property and employees of the Government were used to develop an incomplete conception through its different stages to what finally was the perfected invention, but that the perfected invention, which existed only as an idea in the mind of the inventor, was developed and put into practicable form.

The court uses, on page 348, the language that "his experiments were held at the expense of the Government." By this it clearly meant the experiment of putting his idea into practicable form, which was an experiment. It is none the less an experiment because there is success the first time in which it is sought to embody an idea in material form.

Experiment does not merely mean successive, tentative, progressive efforts, by which defects are found out and eliminated. Its primary meaning is, a trial deliberately instituted; to test, establish, or illustrate a known truth; a practical test. (Webster.)

So, in speaking of experiments held at the expense of the Government, the court did not necessarily mean those by which the invention was brought to perfection, but rather those by which the practical test of an invention was made.

In this same sense the language on the same page, that he "had used the Government machinery in perfecting his

stamp" is employed. The use of the words "develop and put in practicable form" is entirely proper when so applied.

It is contended in the brief for appellant, pages 6, 7, and 8, that this language of the court necessarily refers "to the use of the employer's men and means, not merely in *constructing* the *machine* or *manufacturing* the *product*, but in *perfecting*, that is to say, *making the invention itself*."

It is further said (p. 6) that "to develop an invention is to advance that invention from one stage to another toward perfection, each stage being preparatory to the next; * * * but if the invention is already completed and perfected, as in the case at bar, there is no room for development, and the *construction* of the machine performs no function in the *development* of the invention."

It is further said that the words "to put in practicable form" can not mean to put in "material" form, and that while the Government put these machines into "material" form, it never "in the slightest degree contributed toward putting them in practicable form."

The word "develop," among other meanings, has the following:

To free from a cover or envelope; to disclose or make known. Its synonyms are: to uncover; unfold; lay open; disclose; exhibit. (Webster.)

To unfold; unwrap; set forth; disclose; to bring or work out in full. (Century Dictionary.)

To unfold; to exhibit; to make known. (Worcester.)

To disclose; to further; to promote. (The Encyclopædic Dictionary.)

To unfold something invisible; to work out in detail. (Standard Dictionary.)

To disengage from something that enfolds and conceals; to clear from its covering. (Johnson.)

Dévellopper. This word, of the same derivation, has a similar meaning as those given above of the English word "develop," as, for instance, exposer, présenter en détail; faire connaître; mettre en usage. (Dictionnaire de la Langue Française—Littré.)

The insistence in the brief for plaintiff in error is that "to develop" necessarily means to improve, make better, ascertain defects and correct them.

This meaning is contrary to the natural meaning of "develop" looking to its derivation. It means to unfold like a flower, grow like a seed. But the development adds nothing, corrects nothing, makes good no inherent vice, remedies no mistakes or misconceptions. It expands and changes the form of what is perfect.

In this sense the making of the machine developed, disclosed, the perfect ideal invention.

The word "practicable," among other meanings, has the following: Admitting of use. A thing may be possible and yet not now be practicable for want of means requisite to its performance. (Webster.)

Capable of being used; suitable for practice. Its synonym is practical. Practical means relating or pertaining to use as opposed to the theoretical or ideal; as engaged in practice or action; concerned with material rather than ideal considerations; such as may be advantageously used in practice; possessing utility; exemplified in practice. (Century Dictionary.)

Capable of being used. (Encyclopædic Dictionary.)

That can be used for an intended purpose; serviceable. (Standard Dictionary.)

Capable to be practiced. (Johnson.)

The word *praticable* in French has the same derivation and use as the English word practicable, as, for instance: Dont on peut se servir; qu'on peut faire ou employer. (Dictionnaire de la Langue Française—Littré.)

It is contended that practicable can only mean feasible, and to make practicable can only mean to render something feasible which before was not feasible. And so it is said the invention was complete in the mind and so perfect that one effort to embody it in material form did not make it feasible, i. e., practicable, and that this very success simply demonstrated that it was already feasible. That is true in one sense of the word practicable, but as shown, it has another and distinct sense, which is "capable of being used," and it can not be doubted that this invention was first made capable of being used at the Government expense.

The use of the word "invention" in the phrase "and explicitly assents to the use by his employer of such *invention*" (*Solomons's Case*, 137 U. S., 346) evidently means the *material fabrication* embodying the discovery. This is a proper and usual meaning of *invention*, which is defined by the lexicographers as follows:

The process of thought and experiment by which some new machine, composition, design, improvement, or other article or thing is brought into existence; also, the thing itself thus produced. (Anderson's Dictionary of Law.)

The thing itself which has been contrived; the first contrivance of any machinery by which discoveries are applied to practical use is an invention. (Bouvier's Law Dictionary.)

An original contrivance or construction; a device. (Webster.)

The thing invented; contrivance; device. (Worcester.)

That which is invented; an original contrivance or device. (Century Dictionary.)

The thing invented. (Johnson.)

That which is invented; an original contrivance. (Encyclopedic Dictionary.)

Invent. To fashion; form; frame; fabricate. (Richardson.)

The language of the Supreme Court in the Solomons Case, interpreted in the light of the facts of that case, and the accepted meaning of the words, "develop," "practicable," and "invention," is, in effect, as follows:

> So also, when one is in the employ of another in a certain line of work and devises an improved method or instrument for doing that work, and uses the property of his employer and the services of other employees to develop (i. e., *exhibit or work out in detail*) and put in practicable form (i. e., *practical form, capable of being used*) his invention, and explicitly assents to the use by his employer of such invention (i. e., *the thing thus produced or fabricated*), a jury or a court trying the facts is warranted in finding that he has so far recognized the obligations of service flowing from his employment and the benefits resulting from his use of the property and the assistance of the coemployees of his employer as to have given to such employer an irrevocable license to use such invention. (137 U. S., 346.)

The case of *Lane & Bodley Co.* v. *Locke* (150 U. S., 193) was a suit in equity. Many unsuccessful experiments were made at the employers' expense. In 1872 the device sued on was produced and went into use by defendants with the knowledge of the inventor. The defense relied on was that of a license arising upon implied contract based upon the relation of the parties and the nature of the transactions. (150 U. S., 198.)

The court held that the facts of this case brought it within those of *McClurg* v. *Kingsland* and *Solomons* v. *United States*. The facts in common in all of these cases, and with the one at bar, are:

(1) The inventor was, when the invention was made, in the employment of defendant.

(2) The invention grew out of and was in relation to the subject-matter of his employment.

(3) It was first put into practicable form at the expense of the employer, and in doing this work the inventor was paid by the employer.

(4) The device so put into practicable form was used by the employer in the work in which the employee was engaged, with the assent of the employee.

(5) At the time the device was being put into practicable form and when it was adopted by the employer no notice was given by the employee that he ever intended to claim any compensation for it.

(6) When the device was adopted by the employer the inventor had not applied for any patent.

In *McAleer* v. *United States* (150 U. S., 430), this court quotes, with apparent approval, the principle announced by the court of claims in Solomons's case, as follows:

> That every public officer being in some measure or degree a guardian of the public welfare, no transaction growing out of his official services or position can be allowed to inure to his personal benefit, and that from such transactions, as in the cases of guardian and ward, or trustee and *cestui que trust*, the law will not imply a contract.

The brief for appellant is facetious (pp. 13, 14) at the expense of the Court of Claims, which said, in its opinion, that the machines were complicated, and that, therefore, the experiment of putting them in practicable form involved risk. The brief admits that the loading machine is complicated, but says that three of the machines are very simple, especially the cartridge anvil. There is no finding before this court upon which this assertion can be predicated, and there are no exhibits before the court to illustrate what seems to be considered a ludicrous application of the language of the lower court. Nothing appears relative to the character of the invention, except what is set out on page 6, Paragraph IV, of the record, in which it is said that "the cost of preparing bearings for the iron and steel casting, and of preparing working drawings and of constructing working machines was borne exclusively by the Government." The cost and complication, however, are not controlling facts.

This volunteering of information outside of the record is repeated on page 30 of the brief, where it is said that these inventions "*save many millions of dollars to the Treasury of the United States.*"

In view of the vast amount thus saved, and the modest claim of $94,693.04, appellant like Clive must be amazed at his own moderation. It is remarkable that he should have sold inventions of such fabulous value for the paltry sum of $5,380. (Rec., p. 6.)

II.

If there were an implied contract, it was to pay the value of the unpatented inventions and not a royalty for the use under patents.

The claim is based upon *an implied contract*. Such a contract, where mutual consent is involved, must arise from the conduct of the parties and from such facts that the court will presume that they made by such acts an agreement which was not express, but the terms of which are supplied from what was done as fully as if they had been set out by the parties.

There must be a meeting of minds in respect of the subject-matter to make an implied contract of this character as well as to make an express contract. This is not a waiver of a tort and a suit upon an implied contract, as is suggested in *Schillinger* v. *United States* (155 U. S., 163). All that was done was with the consent of claimant. The petition itself says:

> There is due from the defendant to the claimant, on an implied contract for the use of said inventions, the sum of $94,693.04, no part of which has ever been paid (p. 2).

Assuming that the facts justify the conclusion that there was an implied contract, it remains to determine what the contract embodied. If there was a contract it

was made as of some time. The time in respect of each invention must have been when defendant consented to let claimant make for it a machine which embodied the idea of claimant which had not yet taken form. The material and expense of construction all belonged to defendant. The idea upon which it was formed was the invention of claimant. These were united by the consent of both parties, and became property of defendant to be used in its works.

At that time there were no patents and no notice had been given that they would be applied for. Claimant had no patent to sell, no model to sell. He had nothing but an intangible conception. It could not be said that the officer of the Government by this adoption and use agreed to pay for the value of the use under patents that might be applied for and granted *in futuro*. This right was not in existence, and it would be carrying the doctrine of implied contract too far to assume that the acceptance involved more than was capable of passing by the act of acceptance.

It is not denied that a completed unpatented invention may be the subject of an assignment, grant, or license, and that parties may contract in regard to a patent to be issued upon the invention and that such contracts are enforceable in respect of all that was within the contemplation of the parties. That, however, is different from this case. Here is an effort to make a principal liable on an implied contract for a user by an agent. It is insisted for the Government that the contract can not go beyond what was then involved, and what was used, and that

when machines were constructed, out of Government property, upon an invention afterwards protected by a patent, it can not be said that by the construction of the machine, before the patent, there was created, by an implied contract, an obligation to pay the value of something thereafter acquired, and that this value, not then in existence and acquired thereafter, and which might never have been acquired, related back and inhered in and became a part of the subject-matter of the implied contract.

In *McKeever's Case* (14 C. Cls. R., 396), affirmed in this court without an opinion, and in *Palmer's Case* (128 U. S., 262) and the *Berdan Case* (156 U. S., 565), in which the Government was held bound, *the claimants had patents* which were exhibited as property and which were adopted by the highest executive authority. In this case the partial value of the unpatented idea—for the Government got no exclusive right to it—is all that could be assumed to be the subject-matter of the implied contract. The claimant does not sue for this, but proceeds upon the theory of the value of this use under patents of which the officer at that time could have no idea and which could not have been within the contemplation of the parties.

The opinion of the Court of Claims thus states the question:

> But the implication must be drawn from all the facts of the case, and the contract implied must give effect as nearly as may be to the supposed intent of the parties. It is not the case of the dispossessed owner of property waiving a tort and suing in con-

tract; it is the case of an owner offering his goods to a purchaser upon undefined terms, and who consequently can not now maintain an action of trover or replevin. The contract to be implied is one which ought to be inferred from all the facts of the case, recognizing a mutual intent in both parties and giving due regard to the rights of each.

Now, in this case before us, the defendants, not wrongfully, but at the invitation of the claimant, with his consent and by his solicitation, took his unpatented, untried, unknown device, and by bringing it to a successful, practical result imparted to it a value it had never had before. The defendants did this at their own cost, and assumed exclusively the risk that their outlay might be thrown away and the experiment end in failure.

The claimant gave nothing, contributed nothing, assumed nothing; and, according to his theory of the transaction, he was to give nothing, was to contribute nothing, was to assume nothing. The agreement, which he would have the law make for both parties, was to be entirely unilateral; the defendants were to expend money in building a machine which should test the invention; the claimant was to continue free to bring that state of affairs to an end at any moment by the single expedient of filing his application for a patent, when he would be able to stop the completion of the machine they were building, and impose his own terms for the right to use his invention.

It seems manifest to the court that this would be a contract which the law ought not to imply, and that it would be the result of confusing the law of contract with the law of tort. The court can not look to the law of contract when dealing with the question of jurisdiction, and to the law of tort when

dealing with the measure of damages. If the transaction was one of contract *ab initio*, what was it that the inventor undertook to sell and the manufacturer to buy? If it was simply the thing as it stood, an unpatented, untried invention without reference to a patent being taken out by either party, the mere disclosure of the secret, the damages must needs be simply for the disclosure of the secret, and in such a case as this exceedingly small.

The measure of damages in a case of implied contract is the market value of the thing at the time, not the value which subsequent transactions may attach, or subsequent events disclose. If the subject of bargain and sale was the invention considered as a patentable device, what reason is there for supposing that it was within the mutual intent of the parties that the seller should be at liberty to take out a patent and exclude the buyer from the use of the invention, any more than that the buyer should take out the patent and exclude the seller from all rights in the device?

To the court it seems more reasonable to hold that if a contract is to be implied it should be implied from the whole transaction, and that the whole transaction leads to the conclusion that it was the intent of the parties that the defendants should bear the cost and risk incident to making the device valuable by bringing it to the test of practical success in their own business, and that the inventor should allow an unrestricted right to use it, not perhaps generally, but certainly in the business in which he voluntarily placed it. (Rec., pp. 13, 14.)

There could be no implied contract to pay for the patented invention, which arose from the use of the machines after the patents were applied for, for they were used by claimant himself, who was then superintendent, and who

could not thus make a contract in his favor against the Government, and the machines were the property of the United States, made upon his idea and with his consent and cooperation, and it could not be said that the United States, by the continued use, after patents were applied for, of its own machinery thus acquired, made an implied contract to pay for such patents, unless it be also said that when the machines were made embodying claimant's invention there was an implied agreement that the United States would not continue the use of its own property after patents should be granted, except by the consent of claimant.

After patents were granted the United States did not take any property of claimant, nor did it continue to hold any property of claimant. It simply held and continued to use its own property. There can be no implied contract on the part of the Government to pay for a thing unless the circumstances authorized the claimant to entertain a reasonable expectation of payment. (*Coleman* v. *United States*, 152 U. S., 99.)

Section 4899 of the Revised Statutes is as follows:

> Every person who purchases of the inventor, or discoverer, or with his knowledge and consent constructs any newly invented or discovered machine, or other patentable article, prior to the application by the inventor or discoverer for a patent, or who sells or uses one so constructed, shall have the right to use, and vend to others to be used, the specific thing so made or purchased, without liability therefor.

In respect of all the machines made prior to the application, the rights of claimant are cut off by this section,

for the facts show conclusively that, with his knowledge and consent, these machines were constructed.

If the view above taken of the Solomons case be correct, then, of course, the question as to machines made before or after the application cuts no figure, for, while the Government did not obtain a specific interest in any patent, nor a monopoly of the invention, nor a right to share in the profits thereof, nevertheless it acquired the right to manufacture and use the machines in its service without liability to the inventor. This was held in the Court of Claims in the Solomons case (22 C. Cls. R., 336), which was affirmed by the Supreme Court. The Government acquired the right to use the invention, and not the particular machines which had been made. The case, therefore, is different from that provided for in section 4899 of the Revised Statutes, which applies to particular machines or other patentable articles that had been sold, or constructed, with the knowledge and consent of the inventor.

III.

All other questions out of the way, no implied contract can be set up in this case, for the reason that no officer who did or who assented to any of the things that were done was authorized to bind the United States in the premises.

It seems very clear that no implied contract can arise out of the acts done by an agent when that agent was not invested with such authority as would have enabled him to bind the principal upon an express contract upon the same subject-matter.

In this case the finding of facts showed that the inventions were brought to the attention of the commanding

officer of the Frankford Arsenal, and that the subsequent use of the several machines was with the knowledge and assent of successive commanding officers of said arsenal (Rec., p. 5). This is all. It is not shown that the matter of the adoption of this invention, or the use of these machines, was ever brought to the attention of the Chief of Ordnance or the Secretary of War, or that any officer holding a grade higher than that of the commanding officer at said arsenal knew at any time that these machines, which were built after the invention of claimant, were used by the Government.

Officers and agents of the Government have not an unlimited power to bind it by express or implied contracts. On the contrary, their authority is very strictly limited.

The Government is not bound by the act of its officer unless he acted within the scope of his authority, and individuals, as well as courts, must take notice of the extent of authority conferred by law upon a person acting in an official capacity. (*Whiteside* v. *United States*, 93 U. S., 247, 257; *Hume* v. *United States*, 132 U. S., 406, 414.)

Officers of the United States "are but the servants of the law, and if they depart from its requirements the Government is not bound." (*Moffat* v. *United States*, 112 U. S., 24, 31.)

The following sections of the Revised Statutes which were in force when the acts in question were done express the limitations:

> SEC. 3709. All purchases and contracts for supplies or services, in any of the Departments of the

Government, except for personal services, shall be made by advertising a sufficient time previously for proposals respecting the same, when the public exigencies do not require the immediate delivery of the articles, or performance of the service. When immediate delivery or performance is required by the public exigency, the articles or service required may be procured by open purchase or contract, at the places and in the manner in which such articles are usually bought and sold, or such services engaged, between individuals.

SEC. 3714. All purchases and contracts for supplies or services for the military and naval service shall be made by or under the direction of the chief officers of the Departments of War and of the Navy, respectively. [And all agents or contractors for supplies or service as aforesaid shall render their accounts for settlement to the accountant of the proper department for which such supplies or services are required, subject, nevertheless, to the inspection and revision of the officers of the Treasury in the manner before prescribed.]

SEC. 3732. No contract or purchase on behalf of the United States shall be made, unless the same is authorized by law or is under an appropriation adequate to its fulfillment, except in the War and Navy Departments, for clothing, subsistence, forage, fuel, quarters, or transportation, which, however, shall not exceed the necessities of the current year.

The following section is expressly applicable to the purchase "*of every implement and apparatus for ordnance, and the preparation of all kinds of ammunition and ordnance stores constructed or prepared for said service;*"

SEC. 1164. It shall be the duty of the Chief of Ordnance to furnish estimates, and, under the direction of the Secretary of War, to make contracts and

> purchases, for procuring the necessary supplies of ordnance and ordnance stores, for the use of the armies of the United States; to direct the inspection and proving of the same, and to direct the construction of all cannon and carriages, ammunition wagons, traveling forges, artificers' wagons, and of every implement and apparatus for ordnance, and the preparation of all kinds of ammunition and ordnance stores constructed or prepared for said service.

The provision is explicit that all such contracts and purchases shall be made by the Chief of Ordnance, under the direction of the Secretary of War.

There is no pretense in this case that either the Chief of Ordnance or the Secretary of War ever knew anything of these inventions or of the use of these machines.

It is very clear from the statement of facts that none of these officers ever supposed for a moment that he was doing any act which would bind the Government. None of the formalities required by the statutes for making contracts were complied with in respect to these machines.

If it shall be held that subordinate officers in charge of Government workshops, without intending to do so, can by the mere act of user bind the Government by an implied contract to pay for patents, then it will be seen at once that there is no limit to the obligations which may thus be imposed upon the Government by subordinate officers and without the knowledge of the chiefs of Departments. This case presents a fair illustration, for it is sought through an implied contract, predicated upon such a state of facts, to onerate the Government with a charge of $94,693.04.

There are cases in which the Government has been held liable upon implied contracts, but it is submitted that in each of these cases the obligation arose out of the emergency, or the acts done were by officers who had the right to bind the Government.

In *United States* v. *Speed* (8 Wall., 77, 83) the contract was made by the authority of the Secretary of War. The court held that the action of the commissary-general was such as to infer his approval and that it was a virtual approval of the contract.

In *United States* v. *Russell* (13 Wall., 623, 629) the steamboats were taken by the authority of the assistant quartermaster and under imperative military necessity. The court put the decision upon the extraordinary and unforeseen occasion that arose and the exigency of war and impending public danger.

By section 1133 of the Revised Statutes it was the duty of the officers of the Quartermaster's Department to furnish means of transportation for the Army, its military stores and supplies, and therefore the assistant quartermaster of the United States Army at St. Louis was such an officer as under the circumstances had a right to bind the Government as upon an implied contract.

In *Pitcher's Case* (1 C. Cls. R., 11) the court said:

> But we think we are safe in saying that the doctrine of an implied contract does not arise in any case out of the acts of an agent who has no power or authority to make an express one. It will scarcely be pretended that such subordinate agents as wardens of penitentiaries have the power to bind the faith and pledge the credit of the United States without

> express authority of law, or at least the order and direction of some superior officer of the Government having lawful authority in the premises.

In *United States* v. *Palmer* (128 U. S., 270) this court quoting from the Court of Claims, said:

> In Pitcher's Case there was nothing but an unauthorized use by an officer of the United States, and where an officer of the United States, without authority from them, uses in their service a patented invention, the act, being unlawful, is his and not theirs, and he and not they are responsible for it.

In *Langford* v. *United States* (101 U. S., 345) this court said:

> While Congress might be willing to subject the Government to the judicial enforcement of valid contracts, *which could only be valid as against the United States when made by some officer of the Government acting under lawful authority, with power vested in him to make such contracts, or to do acts which implied them*, the very essence of a tort is that it is an unlawful act, done in violation of the rights of someone.

In that case it was held that where an officer seized for the use of the Indian agency buildings owned by a private citizen, no implied obligation of the United States to pay for the use and occupation of them is thereby raised.

In *United States* v. *Great Falls Manufacturing Company* (112 U. S., 645) the Government was held liable for the taking of land, and upon the theory that there was an implied contract to pay for it; but the decision was put expressly upon the ground that the taking was in

pursuance of an act of Congress which contemplated that this land should be taken, and that therefore the acts of the officers of the Government were authorized.

In that case all the acts done in the premises were by the highest authority, and an appropriation was made by Congress for the purpose.

In *Hollister* v. *Benedict & Burnham Manufacturing Company* (113 U. S., 59), the court said:

> If the right of the patentee was acknowledged, and, without his consent, an officer of the Government, *acting under legislative authority*, made use of the invention in discharge of his official duties, it would seem to be a clear case of the exercise of the right of eminent domain, upon which the law would imply a promise of compensation, an action on which would lie, within the jurisdiction of the Court of Claims, such as was entertained and sanctioned in the case of the *The United States* v. *The Great Falls Manufacturing Company* (112 U. S., 645).

In *McKeever's Case* (14 C. Cls. R., 396), which was affirmed without opinion by this court, the acts upon which the Government was held liable were done by the Secretary of War, the Chief of Ordnance, and a board on infantry equipment. The highest authority of one of the Executive Departments of the Government acted, and besides, at the time the claimant had a patent.

In *United States* v. *Barnes* (12 Wall., 246) there was an express contract, approved by the Secretary of War.

In *United States* v. *Palmer* (128 U. S., 262) the patented invention was by an army board recommended for adoption to the War Department, and was also recommended by the General of the Army, and the improve-